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DECEMBER 1955

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**YOUR BEST BUY
IN CAR IMPORTS**

SPORTS CAR FEVER SWEEPS JAPAN • INSTALL HIGHWAY HI-FI

Now! Turn Your Waste Gas into SUPER POWER!

IT'S TRUE! Now you can get the breath-taking acceleration... jack-rabbit starts... blazing new power that you've dreamed about for years—simply by harnessing the raw, unburnt gasoline that your engine is wasting today! You can get performance from your present car that will make your friends gasp with astonishment—and you can save \$25, \$50, even \$75 a year on gas bills alone doing it!

Yes! You, yourself can fit this amazing **GASOLINE ATOMIZER** on to your car in as little as 20 easy minutes! And it is guaranteed to pay you back your full purchase price, in gas savings alone, in the first 3 to 4 short months that you use it. Here's why!

By **RICHARD JOHNS**

Mr. Car Owner! How would you like to have the driving thrill of your life next weekend?

Picture this yourself! Next weekend you go down to your car—the same tired car that you've been driving for years. You've made only one simple change to that car, so easy that your 16-year-old son could do it! But now, when you turn on the ignition, a modern miracle of engineering science comes to life under your hood!

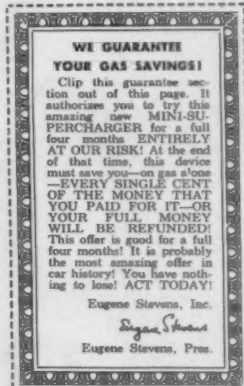
From the very first moment, you'll see and feel the difference in that engine. That engine will hum with new, throbbing power. When you release the emergency brake, your car will glide out of its parking space... roll down the street with your foot hardly touching the pedal. Every 30 or 40 seconds, you'll give that car an extra shot of gas... feeling it spurt ahead... testing the new power that's singing underneath your foot!

We ask you to pull up to another car at the stop light, of approximately the same year and make as your own! Wait until the light changes from red to green. Let the other car start first. Wait till the other car gets half way across the street. And then slam your foot down on the gas pedal!

Before that other car has even crossed the street, you will have caught up with him. For one brief second, you and that other car will race fender to fender. And then you will flash away from him... you will leave him a full block behind... you will look in your rear view mirror and see the startled look of amazement in the other driver's eyes!

TEST THIS NEW POWER A HUNDRED DIFFERENT WAYS!

But this is just the beginning! Test this equipment for one full month—entirely at our risk! Test



it on the highway! Use it to flash away from other cars... spurt up the steepest hills... actually pass other cars in 2, 4, 6 and even 8 seconds LESS than you could have done formerly!

Test this equipment in long-range driving! See the enormous gas savings it gives you at high speeds! Prove to yourself that at 50... 60... even 70 miles an hour, your foot is still half-way up on the pedal—you still have all the reserve power you need to get out of any emergency on the highway!

Yes, and test this equipment in stop-and-go city driving! Prove to yourself that it gives you the instant acceleration you need to get out in front of the crowd... with far less gas than you're using today! Prove to yourself that it can actually save you \$25 to \$50 to \$75 on your gas bills every single year... that it actually pays back its full cost, in gas savings alone, during the first three or four months—or your full money back!

HOW DOES THIS PRODUCT GIVE YOU SUCH TREMENDOUS NEW POWER?

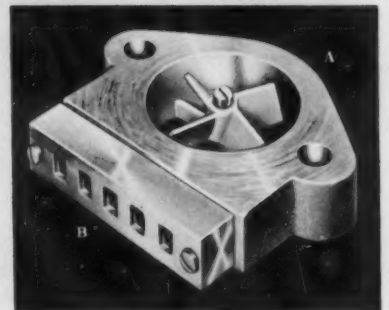
And you get all this performance—and more—from a small, polished machine of bronze and aluminum that you can hold in your hand! Here's why:

Gasoline in its liquid form is not explosive. If you accidentally



YES! THIS AMAZING "MINI-SUPER CHARGER" BOOSTS THE POWER OF YOUR ENGINE AS MUCH AS 25%! Gives you the gas economy you've dreamed about for years! Here's why. This Power Booster works on exactly the same principle as superchargers selling for as high as \$600. Its whirlwind propeller (A) breaks up the raw, unburnt gas that your engine is wasting today... gives you up to 25% more engine-driving power from every drop! Its emergency breather valve (B) forces huge quantities of fresh air into your engine... forces that engine to breathe deeper... push harder... pile up more mileage from every gallon you buy! It gives you A TREMENDOUS NEW BURST OF MONEY-SAVING POWER, just when you need it most—when you flash away from traffic... shoot up steep hills... pick up speed on the open highway!

No wonder dozens of leading car magazines call this the "money-saving discovery of the year." Test this amazing gas-saver yourself—without risking a penny! THE THRILLING FACTS ARE ON THIS PAGE!



drop a lighted match into a bucket full of gasoline, the chances are 10 to 1 that that gasoline will actually put out that match. But simply mix that same bucket full of gas with the proper amount of air, and you will have enough explosive power to drive a ten ton truck!

The main purpose of this machine is to **SUPER-MIX**... **SUPER-VAPORIZE** your gas in exactly that way! To squeeze the hidden power out of that gas! To mix that gas with much greater volumes of air! To make that gas more explosive in the engine of your car!

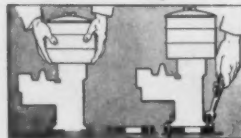
No wonder men have paid up to \$600 for Superchargers! What we are offering you on this page is a **MINI-SUPERCHARGER**—easier to install—less expensive! But still the only power product you can buy with all these tremendous advantages:

1. You can install it yourself, in just 30 minutes, even if you never picked up a tool before in your life! No \$10, \$15 or \$20 mechanic's bills! No drilling, or grinding of any kind! You never even touch the inside of your engine!

2. It never needs further adjustments, for the full lifetime of your car! Nothing to go out of order or break down on the highway. Completely guaranteed for 20 years.

3. It takes up no room in your car... makes no "sounded-up" noise! No shifting around of engine parts. No "hot rod" noises to cause embarrassment!

SO EASY TO INSTALL THAT EVEN YOUR 16-YEAR-OLD SON CAN DO IT!



HERE'S ALL YOU DO!

Step 1. Open your hood. Locate Air Cleaner and Carburetor Unit that sits smack on top of your engine. Simply take an ordinary wrench and loosen the two or three bolts that hold carburetor to the engine!

Step 2. Lift up the carburetor. Put **MINI-SUPERCHARGER** unit in place. What could be easier?

Step 3. Replace carburetor. Now turn on your engine! And then get in and take the most thrilling drive of your life!

TRY IT ENTIRELY AT OUR RISK

This **MINI-SUPERCHARGER** (U.S. Patent No. 2,409,937) sells for only \$9.95 for most six-cylinder cars and only \$11.95 for most eight-cylinder cars. This is your total cost—there is no installation fee! And, most important of all, we guarantee that you will save this full purchase in gas bills alone—in the first 3 to 4 months that you own this device.

You have nothing to lose! Try this equipment entirely at our risk. It must give you a whole new world of driving pleasure and economy or your full money back! Act today!

EUGENE STEVENS, INC.
114 East 32 Street S512
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THIS is probably the most widely sold piece of automotive equipment in the world! OVER HALF A MILLION DRIVERS have paid up to \$3 a set to put these amazing Air Bleed Needles on their cars! But we bought out an entire factory at a sacrifice price! For this one advertisement only, we can offer you these exact same needles as a **FREE** gift, even if you return the **MINI-SUPERCHARGER**!

1. They fit onto the carburetor of your car, where they replace the standard Idling Adjustment Screw. If you have a six-cylinder car, then you will need only one of the Air Bleed Needles (regular retail price \$1.50). If you have an eight-cylinder car, then you will need two needles (regular retail price—\$3.00). In either case, you simply unscrew the old needle and put in the new. THAT'S ALL THERE IS TO IT! Even if you never looked under your hood before, you can do it in 60 seconds—without touching a tool, without even getting your hands dirty!



2. The purpose of these Air Bleed Needles is to STOP YOUR CAR FROM WASTING GAS IN STOP-AND-GO DRIVING... and to save you up to 2 to 4 miles a gallon. If you use your car to go shopping... if you have to fight traffic as much as once a week, then we believe you'll bless the day you first put this equipment in your car! And of course, at the same time it can give you easier, quieter performance and pick-up and smoother, more economical idling!

REMEMBER, THIS IS PROBABLY YOUR ONLY CHANCE TO GET THESE AMAZING AIR BLEED NEEDLES AS A **FREE GIFT**—a gift that is worth as much as \$3 to you—and a gift that is yours to keep even if you return the **MINI-SUPERCHARGER**!

But you must act today! Our supply is limited! We can make this offer only this one time in this newspaper! Simply send in the make and year of your car and this gift is yours! **BUT ACT TODAY!**

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Hudson	Wasp, Pacemaker and Jet	9.95
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Plymouth	1955 Models	11.95
Pontiac	All Six's	9.95
Pontiac	All Six's after 1952	11.95
Studebaker	All Six's	9.95
Studebaker	All Eight's	11.95
Willys	All Models	9.95

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Yes, I want to try your amazing **MINI-SUPERCHARGER** entirely at your risk! I will pay postman only... (low price list), plus low COD charges. I understand that it must do everything you say or my full money back! Also send me as your Extra Gift Premium, the Free Air Bleed Needle Set. I may keep the needles even if I return the **MINI-SUPERCHARGER**.

MAKE OF CAR _____ YEAR _____ Please Print

MODEL _____ 4 DOOR OR 2 DOOR

6 CYLINDERS _____ STRAIGHT 8 _____ V-8

STANDARD TRANSMISSION _____ AUTOMATIC

If you have a 1954 or 1955 car, please give horsepower _____

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

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letters

THE EDITOR, SCI:

May I use your magazine to blow off some steam on a longstanding gripe of mine? Maybe you've got some ideas on the subject.

Road testing as now done for publication needs some reappraisal. I grant the sincerity of those involved, but I question the methods.

A man with a stopwatch is a variable factor whose reactions are not calibrated. The result is that zero to anytime varies all over the lot. Tests that should indicate "braking distance in an emergency stop" are entirely dependent on the amount of pressure that the driver dares apply. Is he locking brakes at 60 mph. or just braking hard? If hard, how hard? Makes a difference!

The concept of borrowing a car for a couple of days may allow some general idea as to performance, but certainly will never give any long term data. Perhaps the tester's ideas of "feel" have some validity, but what about the "feel" that comes only with real familiarity? Case in point: a popular seller that is a good performer, but whose cockpit is as hot as a chicken coop in July—and whose sidescreens let through a steady stream of water whenever it rains.

Time is an important factor in getting the "feel" of any car. It appears, however, that manufacturers and importers are reluctant (maybe foolishly, maybe wisely) to grant the use of their property for such length of time.

Perhaps there is some substitute for the time in the way of instrument testing, improved methods of employing the time that is available.

As I said—you got any ideas?

Gene Wollan
New York, N. Y.

As you said, instrumentation is called for. Electronic devices which have been applied to foot and horse racing may be adaptable. A stopwatch geared to the calibrated speedometer (another problem) is a possibility. Buying the car would help with the time factor, but . . . An article on the whole matter will grace our pages soon.

THE EDITOR, SCI:

I am very pleased to see that you are printing stories of the great drivers like Sammy Davis. A series of such articles would be a fine idea. I think others would also be interested in the stories of the old-timers, and their moderns counterparts, and also in the techniques

of sports car racing, then and now.

Thanks for a readable enthusiast magazine. A little more of the technical stuff and you've got it.

Monroe Singer
New Haven, Conn.

THE EDITOR, SCI:

I've seen some good coverage in your magazine of sports car club activity around the country. May I take up some of your time to query you on what clubs I might join in this vicinity? I know of no other way of finding this information.

George Sternlieb
Rahway, N. J.

Those given here should be a start. Future issues will list all clubs with which we are in contact. Atlantic S.C.A., contact David Woodland, 1625 Atlantic Ave., Atlantic City, N. J.; Berlin A.S.C., contact Charles Undercuffler, Berlin, N. J.; Cumberland County S.C.C., contact Yvonne Tomlin, Box 423, Millville, N. J.; Jersey S.C.C., contact Gustave Szurley, 316 McCandless St., Linden, N. J.

THE EDITOR, SCI:

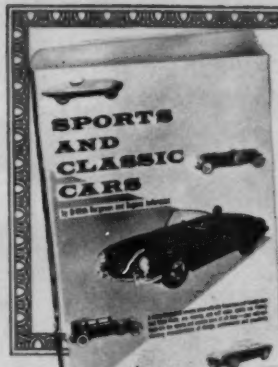
Congratulations on a wonderful magazine. You really have something to be proud of. Lots of luck.

There is just one request that I'd like to ask of you; and that is—when you publish an article will you please give enough information about your product so that the reader is not left out in the rain. On pages 24 and 25 of your Sept. issue you tell how a person can do over the inside of a sports car with "Ramcote" paint . . . I want to do it to my MG TD.

All in all, you have a magazine which is going over big with everyone in our club . . . the Cumberland County Sports Car Club. We have forty some members.

John S. Wolf
Millville, N. J.

Thanks. On the Ramcote story—we've had a bundle of inquiries. Here's the address where you can get info on local sources. Ramcote Leather Finish Co., 1141 West 69 Street, Chicago 21, Ill.



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ACTUALLY 3 BIG BOOKS IN 1

1. SPORTS CARS 1918-PRESENT: ACCURATE REFERENCE WORK! records, photos, track records, design features, history, performance data, specs, engine statistics of every make and model at your fingertips: A.C., Alfa Romeo, Alvis, Amilcar, Aston Martin, Ballot, Bentley (Big Six, Blower, 3½-liter, 4½-liter, etc.), BMW (328, etc.) BUGATTI (Molsheim Period, Types 13, 22, Black Bess, Full & Modified Brescia, 30, 37, 39, 40, 41, 43, 44, 46, 47, 49, 50, 51, 54, 55, 57), Chenard-Walcker, Delage, Delahaye, Duesenberg (Model A, straight-8, model J, SJ), Du Pont, Frazer-Nash, HCS, Invicta, Kissel, Lagonda, Lancia (V-12, Lambda, Dilambda, Triokappa, Artina, Aprilia), Lea-Francis, Lorraine-Dietrich, Maserati (1100, 2.9-liter, 8CTF), Mercedes-Benz (28/95, SSKL, 500K, 540K, 770K, Type 170, etc.), Mercer (Series 4, 5, 6, Raceabouts), MG (M, Marks I, II, III, D, EX-120, C, D, F Magna, EX-127, J, K, L, P, TA, TB, TC, TD, TF), Morgan, O.M., Riley, Salmson, Singer, Squire, Jaguar, (SS-I, SS-90, XK-120, XK-140), Stutz (Bearcat, DV32, Speedway Six, Blackhawk, Super Bearcat), Sunbeam, Pauxhall, Voisin, Auburn, Cisitalia, Daimler, Ferrari, Jowett, Kurtis, Maserati, OSCA, Pegaso, Porsche, Slat, Simca, etc., etc.



2. CLASSIC CARS: Complete data, performance figures, photos, little-known stories on: BUGATTI (Royale, etc.), Chrysler (E-80, L-80, 72, Custom Imperial, Airflow, Thunderbolt, Le Baron), Cadillac & LaSalle (V-8, V-12, V-16, 60, 70, 75, etc.), Cord (810, 812, L-129, etc.), Cunningham, Daimler, Classics de GRANDE LUXE, Dobie (steam), Duesenberg (J, special bodies, records, etc.), Franklin, Hispano-Suiza (Alfonso XIII, Monza, Boulogne, V-12), Isotta-Fraschini (Type 8, Spinto, 8A, 8B, Monterosa), Lincoln (Continental, Zephyr, Model K, KB), MARMON (V-16, 32, 34, V-12), Zeppelin MERCEDES-BENZ (K, SS, 500K, 540K, 770K, 170V, 230, 260D, 320, etc.), Packard (Grey Wolf, 1928, V-12, 120, etc.), PEERLESS, Pierce-Arrow, ROLLS-ROYCE (Silver Ghost, Phantoms I, II, P-III, baby Rolls', U.S. production), STUTZ.



3. GREAT NAMES—GREAT RACES: Which marque won more races than Bugatti and Mercedes from 1894-1949? . . . How Bentley and Sammy Davis widened eyes at Le Mans 1927 . . . Ettore Bugatti's wonderful machines and how they grew . . . Delage & Delahaye, the French touch . . . the Duesenberg Brothers . . . Maserati's 1927 Targa Florio win . . . how Mercedes' famous star rose . . . fascinating genealogy of MG and the men behind it . . . Riley's Brooklands Beauties . . . When Lyons roared, a Jaguar came alive . . . how Harry Stutz gave W. O. Bentley his grimmest moment . . . PLUS 1001 stories and facts about the men who built the world's greatest cars, and the men who raced to glory in them!

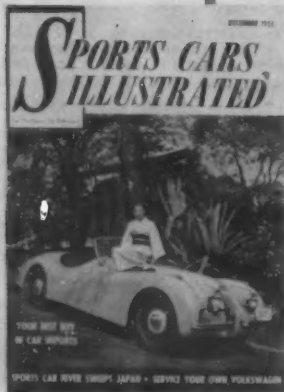
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sports cars illustrated

december 1955
no. 6 vol. 1



Richi-San, heroine of our "Papa-San Pilots" story, perches fetchingly on one of the few XK-120 Jaguars in Japan.

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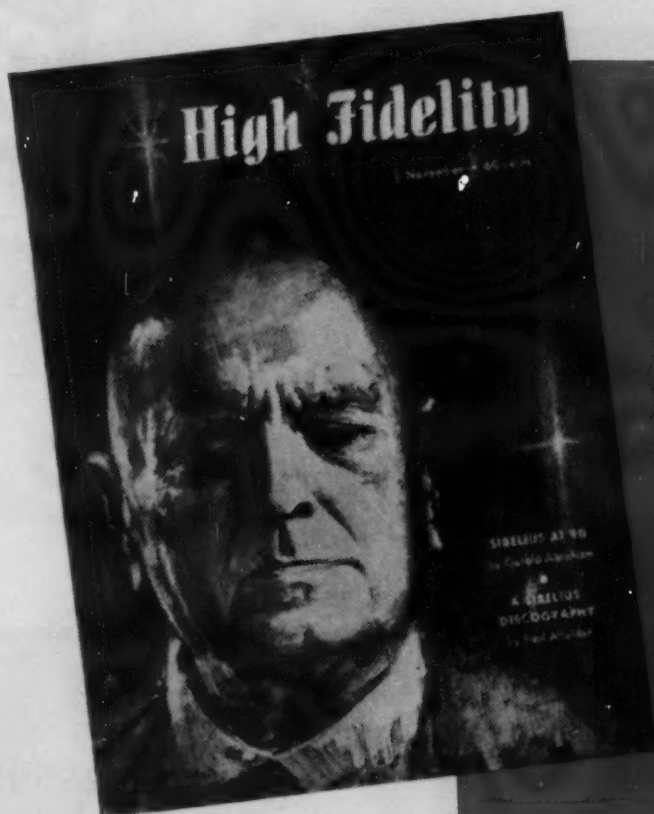
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Volkswagen



**An expanding empire
produces constant
improvements and
ambitious plans
for the future**

Convertible Volkswagen at \$1995 is sportiest of the standard models and is fast becoming a sales leader.

THE story of the Volkswagen is incredible enough to be an automotive fantasy. The VW was conceived in the demented mind of an ambitious dictator; it was designed by one of the greatest automotive engineers of this century; it grew through a clever financial scheme which fleeced thousands of people of their savings. And like the phoenix of Egyptian mythology, it was reborn from a pile of ashes to achieve world-wide fame.

Today you can find the small, beetle-like Volkswagen — the “people’s car” which Adolf Hitler promised the German people and never delivered — in almost every country of the world. Whether speeding over the Autobahn or chugging up a Japanese mountain trail, edging through busy New York City traffic or plowing over a jungle path in South Amer-

“Beyond Expectations” is copyrighted and distributed in the United States by Robert Bentley, Boston, Mass. price \$3.00



American production techniques are used fully in mass assembly and parts fabrication at the VW plant.



New factory is being established in New Jersey to do assembly on this latest model VW.

ica, the Volkswagen demonstrates its advanced engineering, rugged construction, versatile and reliable performance.

Until recently, the history of the Volkswagen and its designer, Dr. Ferdinand Porsche, was not widely known in the United States. Now this fascinating story is told for the first time in **BEYOND EXPECTATION, THE VOLKSWAGEN STORY**, a book written by British automotive journalist K. B. Hopfinger. The following excerpts reveal some of the details of the Volkswagen legend.

"During the autumn of 1930 Porsche was able to find small but suitable office accommodation at Kronenstrasse 14, in the business centre of Stuttgart (where he) registered a company under the name of "Dr.-Ing. h.c. Ferdinand Porsche, G. m. b. H.," whose

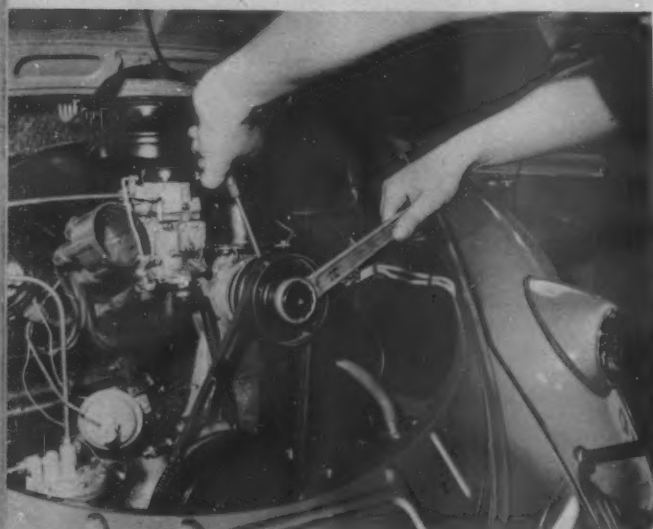
registered business was the design of automotive engines, vehicles, planes and boats.

"Small cars were no novelty in 1931 for there were a number in Germany, and in England those made by Austin, Morris, Standard and Jowett had become as popular as those made in France and Italy. But to Porsche the entire design of the small cars available in those days not only seemed impractical but downright wrong.

"Surely there was no need to place the power unit in front, as was invariably the case, driving the rear axle via gearbox and a long propeller shaft. It also seemed illogical to him to use comparatively heavy components in a fairly heavy chassis frame, and then trying to save weight by using some lightweight body. In Porsche's opinion, a car should be of unit construction, the body should not only be a



Tools for the VW are available in a special kit containing everything needed for maintenance and emergency repair. Packed in a metal case, the kit snaps into center hole of the spare tire for easy use.



Fan belt must be at the proper tension or insufficient cooling will result. Remove the pulley by holding the shaft immobile with a screwdriver and remove the nut with a wrench.



Shims are used to control the tension. Remove shims to tighten the belt; add shims to loosen. Test tension with your hand and make further adjustments as needed.

The Karmann-Ghia-Coupe is the latest addition to the VW lineup. Price has been tentatively set at about \$2300.

shell to contain the driver and passenger, but also fulfill the task of stiffening the chassis, the weight of which in turn could be reduced to some extent. There was also little point in still employing solid front and rear axles, when vehicle speeds were continuously increasing.

"At a time when he was not absolutely certain how and where the engine should be located at the rear, he favored an air-cooled unit . . . He was certain in his mind that an air-cooled engine would be the obvious solution for a low-priced car; its users would in many cases not be able to afford a garage . . . they normally required vehicles to be parked outdoors for prolonged periods. There was another point which made him favor air-cooling — the keen desire of continental motorists to tell of their achievements in having negotiated this or the other mountain road or even having driven over so many mountain passes in a single day. And what was more irritating than having to wait on some mountain road on a boiling hot day for the water to cool down in the radiator? With his gift of imagination, he pictured a car which should not only appeal to people on the Continent of Europe, but would equally well serve a planter in the heart of Africa, or a trader in the chilly plains of Alaska, because of its air cooled engine.

"Having already decided that the vehicle was definitely to have independent suspension, he had now come to a decision as to the type of suspension

Clean the air filter by first wiping insides with a cloth. A broad brush dipped in gasoline should be used to remove grease trapped in maze.





he was going to employ; a swinging rear axle was the obvious solution. He decided to use torsion bar springing for the front and rear wheels. There was nothing particularly new about torsion bars, they had been used in some of the earliest French cars, but he was to use them in a manner in which they had never been used before, namely in connection with trailing links.

"Towards the beginning of December, 1931, Project No. 12 (as the Volkswagen was called) had advanced sufficiently for serious consideration to be given to how to produce a prototype. What had emerged on the drawing boards was no conventional small car. Almost beetle-shaped in appearance, the body had two doors. It had four-wheel independent suspension, the three-cylinder air-cooled radial engine was located at the rear, the wheelbase was 8 ft. 1 in., the track 4 ft., and the net weight of the vehicle was estimated to be 1,430 lbs. The engine was designed to develop 26 b.h.p. at 3,500 r.p.m.

"Within a few days after Porsche approached Neumeyer (Dr. h.c. Fritz Neumeyer, a German industrialist and motorcycle manufacturer) with his suggestion for a small car, a meeting took place between them which perhaps may be looked upon as the actual start of developments which neither of them could have possibly foreseen at that time. Dr. Neumeyer aired his intentions very openly at this meeting that he wanted to produce a 'Volksauto,' meaning a cheap people's car which the man who

owned a motorcycle today could perhaps afford when things improved for him."

BEYOND EXPECTATION goes on to describe how Neumeyer persuaded Porsche to change from a three-cylinder air-cooled engine to a five-cylinder water-cooled engine, mainly to reduce noise and achieve smoother performance. Porsche went back to the drawing boards and designed the new engine. After a few months three prototypes were built, and the book describes the early experiments.

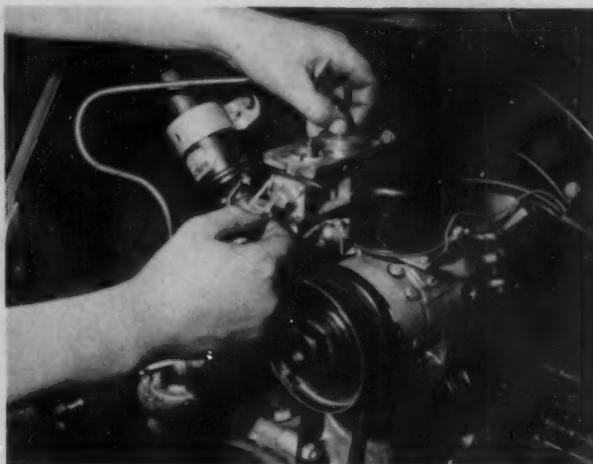
"Initial tests were far from successful. The cooling of the engine was not sufficient, causing two engines to seize up within the first few miles. After days of work rectifying the mistake, the oil temperature of the engines was still near the boiling point. More modifications had to be carried out. Then faults were noted in the gearbox. When everyone already thought nothing further could go wrong, things started to happen in the first long-distance test: the torsion bars of the wheel suspension began to break. This was not a singular occurrence, testers got used to a noise like a shot, to find that the car would lurch down on one side, either the front or the rear—just another torsion bar broken! But Porsche did not lose faith in this suspension. He knew that once the metallurgical aspect was solved the torsion bars would stop breaking, which in fact they did after a considerable amount of experiment and research work."

Because of bad economic conditions, explains the

Carburetor is disassembled by removing four screws at base of collar. Wipe all components with a clean cloth. Parts are delicate; be careful not to damage the thin metal stampings.

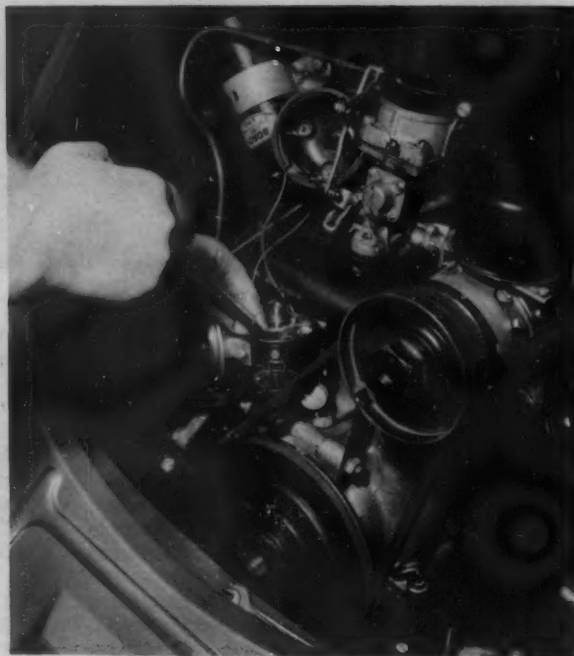


Float is removed by grasping top protrusion and lifting straight out. Jets located on each side of carb must also be removed and cleaned.





Testing final adjustment is done by rotating the set screw while feeling the pulsations on the palm of your hand. Pulsations must be smooth and even.



Distributor is serviced by first removing cap and prying out points for inspection. Should the points be pitted, they can be dressed by filing. Replace the entire set if damage has gone too far.

VW Sedan, phantom view

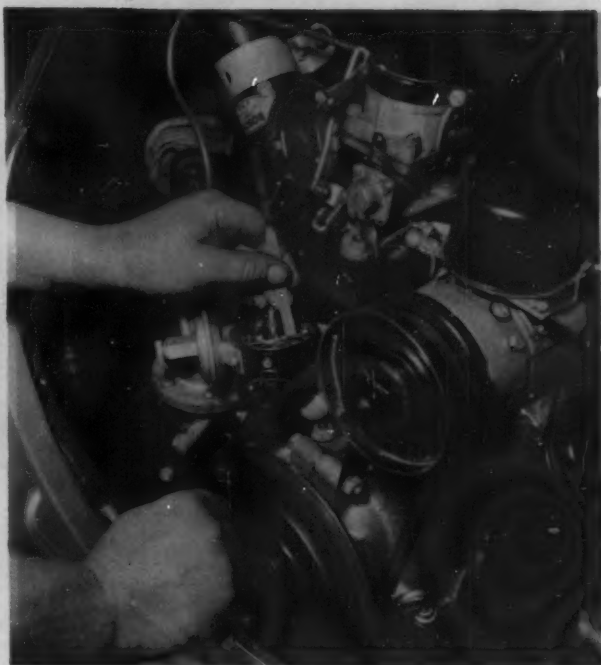
- | | | |
|---|---|-------------------------------|
| 1 Worm type steering gear | 12 Shock absorber | 22 Starting motor |
| 2 Front axle and square torsion bars | 13 Crankshaft | 23 Heating control |
| 3 Fuel tap | 14 Oil strainer | 24 Hand brake lever |
| 4 Brake master cylinder | 15 Camshaft | 25 Vent wing handle |
| 5 Pedal linkage | 16 Oil pump | 26 Direction indicator switch |
| 6 Battery | 17 Muffler (Silencer) | 27 Speedometer |
| 7 Socket for car jack | 18 Generator | 28 Gearshift lever |
| 8 Rear torsion bar and cross member | 19 Oil bath air cleaner | 29 Fuel tank |
| 9 Transmission, 2nd, 3rd and 4th gears synchronized | 20 Carburetor and accelerator pump | 30 Brake fluid reservoir |
| 10 Differential | 21 Fan with thermostatically controlled throttle ring | 31 Spare wheel |
| 11 Clutch | | |

book, and because there seemed little chance to make a profit on such a car, Neumeyer decided to give up the project. Porsche allowed one of the prototypes to remain in actual use until 1944, almost 12 years, when during an air raid on Stuttgart, the garage in which this Zundapp-Porsche "Volksauto" was parked received a direct hit. The other two cars at Nurnberg were destroyed in a similar manner.

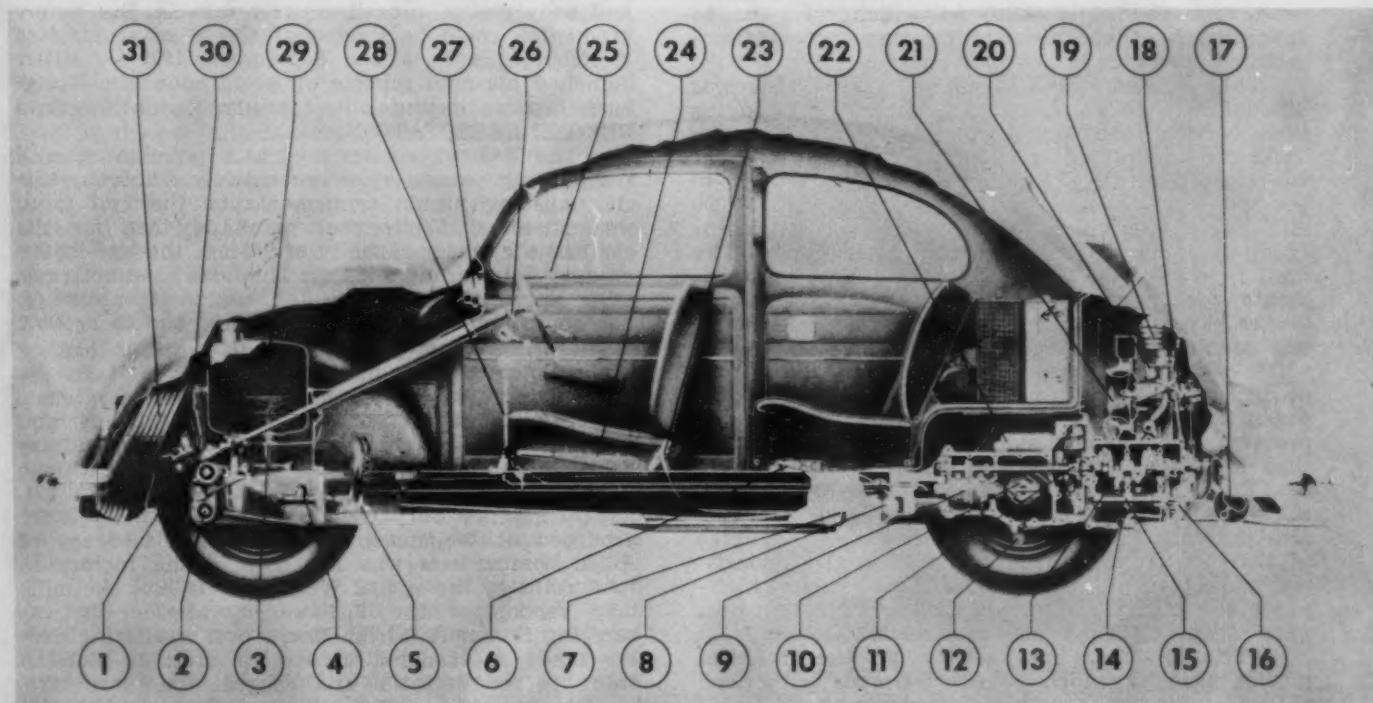
Porsche then turned to N.S.U., competitors of Neumeyer's Zundapp works, and offered them the car. He received a contract to produce three more prototypes, this time with a four-cylinder horizontally-opposed air-cooled engine of about 1.5 litres developing some 30 b.h.p. These three prototypes, after much experimentation, performed even better than the three Zundapp "Volksautos," achieving speeds up to 72 m.p.h., then unusual for a car of that small size. But N.S.U. also decided to quit automobile production, and Porsche was by now engaged to develop a racing car for Auto-Union which was to receive financial backing from the German government.

"It is interesting to learn," continues Hopfinger, "that one of these Porsche-N.S.U. prototypes was discovered in 1945 in a shed near Neckarsulm, having been stored since 1940 after being in continuous use from 1932 onwards. Apart from certain parts slightly affected by rust, it was otherwise in good condition and was sold for a nominal sum to an employee of the N.S.U. company. He cleaned it, fitted new tires and batteries, and the car, which had already done more than 200,000 miles, was still capable of a maximum speed of 72 m.p.h."

Porsche met Hitler in March, 1933, and BEYOND EXPECTATION describes Porsche's amazement when Hitler informed him he wanted a people's car to sell

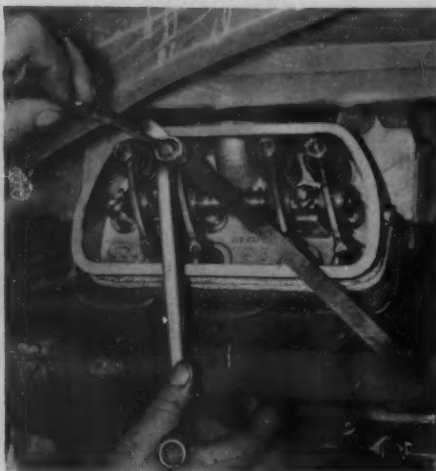


Point file should be worked back and forth between the point faces until a smooth and positive contact is achieved.





Setting is done with a .4mm guage while turning screwdriver until the point faces "kiss" the guage. Be careful not to transfer grease to the points during this operation.



Valves are located behind the rear wheels.
Loosen nut and set tappet screw to .10mm while the engine is cold.
Replace gaskets carefully to insure an oil tight seal.

for no more than 1,000 Marks. Since the Zundapp Volksauto was planned to sell for 2,800 Marks and the N.S.U. version was to cost 2,200 Marks, the 1,000-Mark price tag was ridiculous to Porsche. But Hitler, in those days, was not to be denied. On June 22, 1934, Porsche signed a contract to design and build prototypes of the Volkswagen which were to be sponsored by the Society of German Motor Manufacturers.

Thus started VW-Series 3, a project that was scheduled to take ten months. Porsche divided his time between the Auto-Union racing car and the Volkswagen, the latter requiring not ten months but 28 before the three prototypes were turned over to the sponsors. Tests of the three cars covered 31,000 miles and lasted 70 days, with some of the prototypes covering 700 miles in a 24-hour period. The final report on the tests pointed out that improvements were needed in the front axle and in the brakes but concluded that "the general performance and roadholding characteristics have proved on the whole entirely satisfactory." Despite the fact that the production Volkswagen could not conceivably be produced for 1,000 Marks, Hitler was determined to proceed with his brainstorm. It was then, in 1937, that Robert Ley entered the picture.

"Robert Ley, chief of the Deutsche Arbeitsfront, the Nazi Party Labour Organization, was in effect also the Minister of Labor. Ley was also in charge of the 'Kraft-durch-Freude,' the 'Strength-through-joy' movement. The Autobahn, those super highways, the Siegfried Line and other defense works were all the efforts of his labor teams."

While Ley was busy setting up the financial scheme through which 300,000 Germans subscribed \$70,000,000 for their promised Volkswagens (and build-

ing the factory in Wolfsburg to produce them), Porsche was busy too, constructing two more series of Volkswagens, Series-30 and Series-60. The latter, comprising 60 prototypes, covered more than 1,500,000 miles in severe tests. The 995 cc. horizontally-opposed air-cooled engine, along with the suspension and body design, proved entirely reliable. But before production could be started at the nearly-completed Wolfsburg plant, it was September, 1939 — Hitler launched his mad scheme of world conquest. Wolfsburg began turning out a military vehicle. Says BEYOND EXPECTATION:

"The Volkswagen designed as a popular car and the military version were two entirely different vehicles, although some components in the two types were identical. While the engine designed for the car had a cylinder capacity of 995 cc., the one in the military vehicle had 1,134 cc. This also meant various other detail alterations to the engine, transmission and components. The military vehicle had to be able to negotiate cross-country terrain with a load of four soldiers and equipment, and this in turn required considerably stronger front and rear wheel suspensions, apart from a reinforced chassis and different steering gear. The body of the military vehicle, almost box shaped, was that of an open four-seater with four doors."

During the war, less than 100,000 vehicles were produced at Wolfsburg, thanks to the accuracy of Allied bombardiers who left 65% of the factory in total ruins by the end of World War II. But the military version of the Volkswagen, whether it was carrying Rommel's Afrika Korps over sweltering desert sands or trudging across the freezing Russian front, proved versatile and rugged.

One morning in 1945, all the storm troopers who



Brake fluid filler is located behind the spare tire. Test level with finger and fill to the top. VW or Lockheed brake fluid may be used.



First in U.S. foreign car sales is the VW.



Plugs must be gapped to .6mm. Feeler gauge should be a "running" fit between plug points. Don't try to squeeze extra mileage out of doubtful plugs.

controlled the 5,000 forced laborers at Wolfsburg had vanished. Allied troops were closing in. The forced laborers, mostly Russians and Poles, rioted when they broke free and began damaging the plant even further. It took a burst of machine gun fire directed by an American lieutenant in a Jeep to restore sanity and order, and soon the British occupational forces were taking over.

While Porsche was imprisoned in France by some French Communists, activity began again at Wolfsburg. German engineers and mechanics were allowed to enter the plant to get whatever personal belongings were left. They offered to repair British and American military vehicles, and the British, busy with occupational activities, welcomed the help. Soon the Germans had recovered some dies and were restoring battered machinery. They asked for, and received, permission to construct a few cars to help solve the transportation shortage existing at the time.

The Volkswagen story from this point onward is pretty well known. By the end of 1945, some 6,000 civilians working at Wolfsburg had produced 713 vehicles. The British, feeling that no one would ever want any of those ugly, beetle-shaped cars, declined to take over the plant. They offered the

(Continued on page 57)



Windows can be kept in good operating order by applying talcum powder to the rubber gasket. Work the window up and down until it runs smoothly.



PAPA-SAN

By ALLAN R. BOSWORTH

THE red MG at the head of the line, waiting to buzz down the Tokkaido Highway—Japan's Route Number One—bore a stranger device than anybody realized. Painted across the cover of its spare wheel was the word HARE . . .

To you and me, that is a reminder that the race is not always to the swift, a proverb especially applicable to sports car rallies in a land where the speed limit is thirty-five miles an hour, and where chuckholes two feet deep appear without warning. But to the small Japanese girl who sat beside me as the honorable *kokai suru* person, or navigator—better known as *guido*—the label was only confusing.

This was Richi-san, youngest, prettiest and brightest member of the informal English class I conducted in the forlorn hope of effecting a fair exchange—English for Japanese. She looked about fifteen, weighed perhaps ninety pounds dripping wet, and just simply roved Su-ports Car Crub events.

"Papa-san?"



Rally ready line at Ninety Mile Beach, Chiba Prefecture, Japan. Straight, hard-packed beach at low tide makes good course,

Funabashi track during meet of the Sports Car Club of Japan.



Check-point on Chiba Rally contrasts English engineering and Nipponese styles.



PILOTS

"Papa-san, what meaning 'har-reh,' Engrish su-peaking?"

"Har-reh?" I puzzled, and then, when she pointed to the sign: "Oh, that means rabbit—*usagi*. That car is *usagi*, and all these others are *inu*. Rabbit and dogs—hare and hounds. Understand?"

She shook her head. "I don' sink *usagi*, Papa-san. I don' understand. Japanese su-peaking, *har-reh* meaning justa rittle stomachy, anda nice wezzer. I don' know."

"I don't know, too," I muttered. The starter was about to give us the flag, but you can't embark on any kind of enterprise with such incongruities as justa rittle stomachy and nice wezzer left hanging in the air. I reached for the dictionary.

Sure enough, spelled in *Romaji*, the word *hare* means "a stomach tumor," and a word spelled exactly the same means "clearing weather."

"You win," I told Richi-san.

"What meaning u-in, Papa-san? *Kaze*?"

"Not wind—*win*. Why have you people mixed up the language like this—*hare* and *hare*? Japanese is *taihen muzukashii*—very difficult!"

"Yes, Richi-san?"

"Engrish easy, Papa-san?"

"Of course. Hare—we pronounce it hare, not har-reh. Like the hair on your head, only it means *usagi*."

"Thirty seconds!" yelled the starter. "Twenty—ten—five—Go!"

We went, one of twenty odd sports cars popped at timed intervals into the unending stream of three-wheeled trucks and bleating *takushi* cabs. We were to watch for lime marks on the pavement, for special signs indicating that numbered discs of cardboard were hidden somewhere in a hundred foot radius; we were to attempt to overtake the *usagi* if we could, and to wind up about noon in the vicinity of beautiful Lake Hakone, where neither of us had ever been.

Three blocks farther, and Richi-san made the understatement of the year:

"Engrish anda Japanese, Papa-san, justa rittle different!"

Sports car rallies and motoring in general in Japan are also justa rittle different than anywhere else. Driving over there will give you ulcers, if not, indeed, a sizable *hare*, or tumor. A day at the wheel leaves you weary,



Sports jobs meet real test on dusty, bumpy roads. Jammed checkpoint "sports" local vendor.



dusty, bewildered, and certain of only one thing: Japan is an ancient country whose roads were built long before the invention of the automobile and the same roads and things Japanese will still be there long after the last *jidosha* has rusted.

Back in 1933, the following English version of "Rules of the Road" was posted in Tokyo's Central Police Station:

1. At the rise of the hand policeman, stop rapidly.
2. Do not pass him by or otherwise disrespect him.
3. When a passenger of the foot heave in sight, tootle the horn. Trumpet at him. Melodiously at first, but if he still obstacles your passage, tootle him with vigor, express by word of mouth the warning "Hi, Hi."
4. Beware the wandering horse that he shall not take fright as you pass him by. Do not explode the exhaust box at him. Go soothingly by.
5. Give big space to the festive dog that shall sport in the roadway.
6. Go soothingly in the grease mud, as there lurks the skid demon.
7. Avoid tanglement of dog with your wheel spokes.
8. Press the braking of the foot as you roll round the corner, to save collapse and tie-up.

The Japanese were ever obedient to the law of the land. They are still tootling, with vigour. Tokyo is, without doubt, the tootlingest town in the world, which leads British residents to write indignant letters to the editor of the *Nippon Times*, asking if "something cannot be done about the excessive horning." Not only have the Japanese developed tootling into a fine art, but their mechanical skills have not been idle, and horns stamped "Made in Japan" can make a Detroit tootle sound like a confidential whisper.

But Japan, with its narrow roads and teeming traffic, is built for the small car. The MG-Morris agency thrives, the Volkswagen people must be making yen by the million, and Japanese streets at the rush hour present almost every kind of car in the world, with the smaller makes predominating. This cosmopolitan air applies to the Sports Car Club, and especially to its membership card. The latter

Richi-san, the lovely "guido" for Papa-san Bosworth, fears her hair may be "bu-roke."



shows a wheel, to *torii* gate, emblematic of Japan; it bears English and Japanese text—and at the bottom, with a fine international flair, is printed: "Pour le Grand Sport."

Come back now with Papa-san, tooling down the Tokkaido. We are now beyond Yokohama, and there are stretches of green countryside, colorful villages, rice paddies, ancient shrines, and chuckholes. It is very nice *wezzar*, indeed, the kind of *wezzar* that brings the Japanese out for "cherry-viewing," "moon-viewing," or a plain American style *pikunikku*. It is, in fact, good top-down *wezzar* . . .

"Papa-san?"

"Yes, Richi-san?"

"Don't put on cover?"

She is asking if I am not going to put the top up. I tell her no, I wouldn't be caught dead with the top up on a day like this, and ask her if she is cold.

"Not cold, Papa-san. But hair *bu-roke*."

I tell her that a wind-blown bob is quite the *sutairu* in the States, although I really don't know because I've been away quite a while. And everybody knows how women's *sutairu-s* are—like butterfly, all time changee-changee.

"Papa-san, today morning I'm forget somesing, ever'sing. Ba-ad head, don' you?"

Richi-san never asks "Don't you think?" but just "Don' you?" I would be less than a gentleman if I told this small girl I agreed. I insist she has a very good head; she is learning English fast.

"No, Papa-san—ba-ad head! Today morning I'm forget sun gu-rasses anda camera. Engrish supeaking, Papa-san, 'hat you say—somebody's house?"

"Somebody's house? I don't get the connection."

"Maybe anybody's house. Papa-san don' understand anybody's house?"

"No—I mean yes, I don't understand."

"Watsmatta you, Papa-san?" and she taps her forehead. "Somebody's house—anybody's house! Maybe srand supeaking!"

"Slang? Oh—you mean nobody home?"

"Yiss, of-a course, Papa-san!"



That man is here again. Neck-piece styling may find use in dusty Stateside rallies.

Spark plug of Japan S.C.C. is J. L. Johnson, M.G.-Morris-Riley service manager in Tokyo.



Papa-san is still chuckling to himself over that Nineties Nifty a couple of kilometers later, and also is beginning to worry about the route.

"You think this is right, Richi-san?"

She sticks out her hand. "Right? *Migi*, Papa-san?"

"No, not that kind of right. You see, we have several words pronounced right. One means *migi*. One is spelled w-r-i-t-e, like write a letter. Another . . ."

"Oh, Papa-san, I'm forget. Day behore yesterday come to my house retter. Kyobashi aunt and unc' su-peaking. 'Harro, Papa-san, sank you ver-ree much.' They said."

"That's very nice of your Kyobashi aunt and uncle—you tell them hello for me. But I mean is this the right road—the road to Hakone?"

"Papa-san su-top, I'm risten."

"You'll what?"

"I'm risten." She cups a hand to her ear. She will ask a question and listen for the answer.

We stop. She hails a woman in kimono. They bow. The air is filled with greetings and salutations, with smiles and pleasant amenities that extend to the honorable husband, the honorable father, the honorable ancestors. Each chatters at length while the other nods, interjecting occasional "Ah, so's?" along with "Ha-ha" and "*so desu ne?*"

The minutes pass. Papa-san fills his pipe. He looks idly into the Japanese dictionary, understanding an occasional word. Now Richi-san thanks the woman. The woman thanks her. They bow three times. Each says, "*Sumimasen*," which means "I am sorry to have been of such great bother to you." Each says in Japanese, "It is nothing; it is this side that owes." They say "*Sayonara*."

We get under way again. Richi-san looks at me, her small face aglow with good will.

"Ver-ree kindness, Papa-san! Good heart, don' you?"

"Yes, I think she is a very kind woman, and has a good heart, Richi-san. But what about the road to Hakone?"

"Oh, Papa-san, Hakone road she don' know."

You can lose a large number of Su-ports Car Crub runs like that in the land of the cherry blossoms . . .



Two-wheel, as well as four-wheel, racing draws the crowds at Funabashi track.



*Creative
Engineering
Produces
The New*

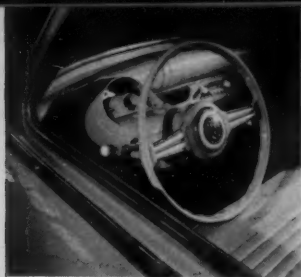


DYNA PANHARD 55

Casting aside many traditions of the modern auto age, France has come up with this revolutionary new car. It can make 80 mph on its two-cylinder engine—and guarantees at least 35 mpg.



All aluminum body and chassis are welded together into single rattle free unit.



Interior is rugged and functional with ample space for six passengers. Note American directional signal on steering column.

DYNA PANHARD

By ADRIAN CHARLES

WITH the modesty and dignity of an old, old firm, the Panhard and Levassor motor company of Paris, has gone into quantity production with a car which is as revolutionary in concept as anything the world has seen since France first started making automobiles. And France, let us not forget, was making motors when the rest of us were still gazing in wonderment at horse and buggy rigs.

Panhard's new Dyna 55 is a stream-lined low-slung saloon capable of a top speed of 80 mph. with magnificent acceleration and an average fuel consumption which is guaranteed not to exceed 35 miles per U.S. gallon! The word "revolutionary" comes into the picture when we find that Dyna has a two cylinder engine of only 850 c.c's total capacity.

Despite such a tiny power package there is nothing freakish about the six-seater Panhard. Rather does it represent the true courage and initiativeness of the French in one of their all-too-rare moments of brilliance nowadays.

No other designer in the universe, except perhaps another Frenchman, could have designed the new Dyna and nobody but a Parisian would have shown such little respect for the acknowledged customs and conventions of the modern automobile age.

The decision to approach the problem of designing a fast, economical six-seater car was, say Panhard and Lavassor, coloured by an underlying factor that past experiences must act as the guide—and never as the rule.

It has been proved that the average reserve of power required to propel a 2,300 lb. six-seater car of conventional shape and design at a speed of 60 mph. is 42 brake horsepower. To reach 80 mph. it needs an extra 10 bhp. These figures are based on the assumption that two passengers are aboard and a normal fuel and oil complement is carried, thereby adding a further 485 lbs. or 18% to the car's deadweight as stated.

"Now," theorized the Panhard designers, "we know that as much as two-thirds of the power allotment is absorbed in overcoming wind resistance in the case of the conventional-shaped motor-car. The advantage therefore of reducing wind resistance is of vital importance."

Panhard's research staff kicked this basic doodle around for quite a time before arriving at a conclusion. When they did, it was to propound a law of their own to show that if the weight of a scientifically stream-lined car could be re-

duced to 1,300 lbs. then the same power output (42 bhp.) would move it at 80 mph. as compared with the 60 mph. of the conventionally styled car.

Their designers worked along these lines until the Dyna as it stands at the curb today weighs only 1,234 lbs. Yet, the power output is 42 bhp. and the co-efficient of drag has been whittled down so that the Panhard absorbs less than half the strength normally required to propel a conventional car through a similar atmospheric resistance.

The initial form for the saloon coachwork was established on the basis of wind tunnel experiments with a model built to one-fifth scale at the Aerotechnical Institute at St. Cyr, and the shape was later refined after full-scale road experiments in head winds and side winds at speeds between 50 and 80 mph. For the road experiments small universally-jointed indicators were used to reveal the air flow over various parts of the car, and their behaviour was recorded by remotely controlled cine-cameras. Special attention was given to ensuring directional stability in side winds, a point of special importance on a light, fast car. Figures released by the Panhard design department indicated that the total power required to propel the Dyna at 75 mph. is approximately 35 bhp. which is divided between 13 bhp. for rolling resistance and 21-22 bhp. to overcome wind resistance. This compares with 55 bhp. required in the same conditions for a conventional car of comparable size.

Here's what the Dyna can do:

Top speed	80 mph.
Fuel consumption (minimum average)	35 U.S. mpg.
Acceleration 0 - 30	6 secs.
0 - 50	16.5 secs.

Mechanical data

Rear seat	53 inches across
Front seat	53 inches across
Engine capacity	850 c.c.
No. of cylinders	2
Bore & stroke	86 x 75 mm
Valves	Overhead
Compression	7.2:1
BHP	42 at 5,000
Electrical	12 volt
Brakes	Hydraulic

(Continued on page 63)

DECEMBER '55



By S. C. H. DAVIS

FOR a car that has crashed at top speed and been badly damaged to win is rare in racing history. Yet that is exactly what occurred way back in 1927 in the 24 hour race at Le Mans in France.

It happened this way—

The British Bentley team had done its level best to prepare the three cars for the show, two three-litres and a new type four and a half litre bigger, faster, fiercer than any we had had yet. It was a good team, mechanics, chart keepers, spotters, all knew their jobs. Designer Walter Bentley supervised. Drivers were "Sunshine" Clement from the company, Leslie Cullingham of a big fuel company, George Duller one time champion hurdle racing jockey, Baron D'Erlanger, Doc Benjafield, bacteriologist, and myself. George not only knew all about horses but, in our opinion, talked horses and looked like one. Main point—and this made the team—was that every single man knew his job, and was expert at it.

But "Benjy" and I were driving a three litre which had borne the number 7 in the race of the previous year, a car we both liked and which had liked us—a most important point. But, and it was a big but, in the last hour of the 1926 race I had gone off the road dismally when a certain third place seemed there for the asking, and no amount of explanation that the brake linings were worn down to the shoes availed as excuse. Then Benjy, coming along nicely in another race, had gone up a tree for the same reason. So we two were not exactly popular, as you will imagine. And, which was worse, the car did not like us either, having in mind that neither was to be trusted. If the mechanics and I checked everything once we checked it ten times, finding no fault, yet go the car would not and the rhythm of the engine though regular was angry. That made us sure that old number 7 would take a lot of coaxing if we

were to see the finish with her.

Though both of us were extremely polite to the old girl she just sat there and glowered. We completed practice in a gloomy mood partially enlivened by the knowledge that the four and a half litre was fast and had a mighty good chance.

Hours before starting time, on a Saturday afternoon, we assembled at the pit, very queasy in the stomach, quite as usual before a racing battle, not wanting to talk to anyone, particularly. For this race all the cars are placed in a line parallel with the course, nose outwards, and the drivers on the opposite side, one for each car, as we take three hour spells.

When the flag drops you dash across, leap in, start the engine, and get going, a process which seems to take hours but actually loses only seconds, although hampered by the fact that so many engines roar off together you cannot hear whether yours has started or not—so judge by instruments. Well we all got away, hell having no fury like a driver's if the engine does not respond and he is left alone with his car while all the rest howl away and he feels the amusement of thousands of spectators.

At first we were held back by a signal from the boys in the pit who control tactics and who wanted the engines warmed up before they were let go. But the team got into formation, number 1 the four and a half litre, then number 2, a three litre, and then my number 3. By the way, the racing number of the car this time was 3 but we always referred to her as old number 7.

It seemed difficult to believe but when we were signalled to increase speed, maintaining line ahead, my car pulled like a two-year old, gone was the angry feeling; the machine had obviously decided to give us a chance. Barring the first lap on which cars were crowded together in a highly

Nightmare

GRAND PRIX



Bandaged and reinforced with his favorite champagne, the author poses for this somewhat stark victory photograph.

dangerous manner (anything could happen), it was as usual, exciting. There is something about taking a car you know round a corner that is the very breath of life, a thing inspired. You can feel the car enjoying itself. Down the long straight the engine was so magnificent that my restraint alone kept the car from overtaking its next ahead.

There was fun on Pontlieue, one of the sharpest hair-pin corners ever included in a circuit, firstly because we had only just enough lock on the steering to get round which left no margin for error; secondly, because it's approached down a long hill where the road narrowed between houses. At very high speed you had to keep thoroughly awake and in no circumstances pass the set cut-off point. Cut off points are the spots at which you must shut the throttle—get busy with brakes and gear shift to slow enough for the turn. Mine for this corner was a small vividly colored house. This corner is no longer used for the race. It was thought to be too dangerous.

Everything seemed to be going like clockwork, all gauge needles stood at the right point, temperature of oil and water, oil pressure, air pressure, engine revs at a given spot—it could not have been better. And the car sounded good, for a racing machine talks, telling you how it feels and if anything is wrong. It was a great moment after the doubt and worry before the race, while the spectators no longer seemed a collection of vultures cynically waiting for a crash, but cheerful, friendly people hoping you would succeed. The dismal forebodings before the start had vanished as soon as the race commenced. So we roared on while the light of a summer day faded slowly into dusk. That is a bad time, for you can see no better with the headlamps on, yet cannot see well without them.

As I passed the pit I saw a signal "increase distance between cars." This was normal at dusk since the cars could all be involved if one crashed at night and they were all close.

What was happening in the race, naturally, I had no idea save that we had overtaken the tail at about the lap I thought we should, and that several dangerous rivals were in trouble. Worry about race position was none of my business. I had to obey signals and keep on the road while giving the car the easiest possible run for the speed. The dusk began to be noticeable and it was harder to keep to the exact line on the curves, though doing so meant the difference between going round sweetly and pulling the car round. The very fast turn at White House—so called because identified by a white walled house nearby—was a little tricky. You came down to this very fast, downhill, went over a small bridge, the parapets of which were rather close and looked closer at high speed, swung left, came over right and, just at the right moment, took the left bend without easing the throttle—the car heeling a little so you knew you were close on a skid. Leaving the turn, you had to hold the front in close to the verge or the whole machine would slide right across the road into a nasty looking high grass-covered bank.

The car would be much slower uphill to the pits beyond. I came downhill to this turn with never a care in the world, partly because I liked this stretch of the lap better than most. Suddenly, in the tail of one eye, I saw splinters of wood. Once before in a Grand Prix race I had seen just those splinters and there had been an overturned car just round the corner. The splinters came from the split wood pailings guarding the circuit. Automatically I shut the throttle; there was no question of thinking it out, it was purely instinct.

(Continued on page 56)

the new MG model *a*

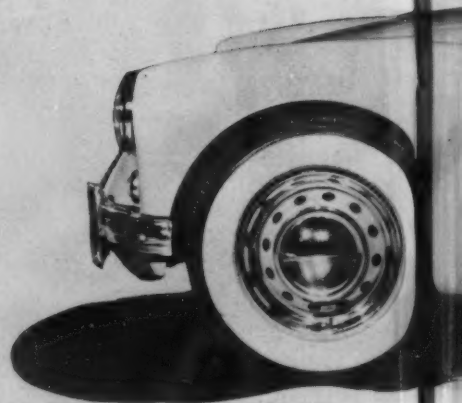


WHEN a proud old family produces a new heir, there is understandable speculation on whether the new arrival will maintain the standards expected. Not to draw the analogy too fine, this is the situation with the famous MG marque. The characteristic family physiognomy has had a severe lifting . . . in this case, a concession to progress, and the laws of aerodynamics.

The classic appearance of the MG family: the flowing wings, square front, angular tail — in general, plane surfaces as opposed to the flowing line, had been retained from the introduction of the J2 Midget (see above) in 1932 through the TF, introduced to the public in 1954. The Nuffield people, however, felt that the traditional shape had become a limiting factor, performance-wise. Even the newer, 1½ liter TF was up against its own sound barrier at about 85 mph.

Hence, the long-awaited MG A, built in close accord with the lessons learned from the Le Mans entry, the prototype of the A. This development traces its source from George Eyston's MG Special which smashed 8 International and 29 American Class F records at Bonneville Flats last year.

The four-cylinder, 1489 cc. engine of the A brings the horsepower rating up to 68 at 5,500 rpm., 13 more horses than the standard form of the TF. The engine is a twin carburetor version of the B.M.C. "B" series unit, driving through an hydraulically operated Borg and Beck 8 in. clutch and 4-speed synchromesh gear box, synchro being on the top three gears. An unmod-





ified version will yield upwards of 90 mph.

Built to give maximum strength and rigidity (remember—Safety Fast), the new MG A chassis has deep box-section side members. These members are outswept, permitting the driver and passenger to sit within the frame rather than above it. The factory promises exceptional roadability.

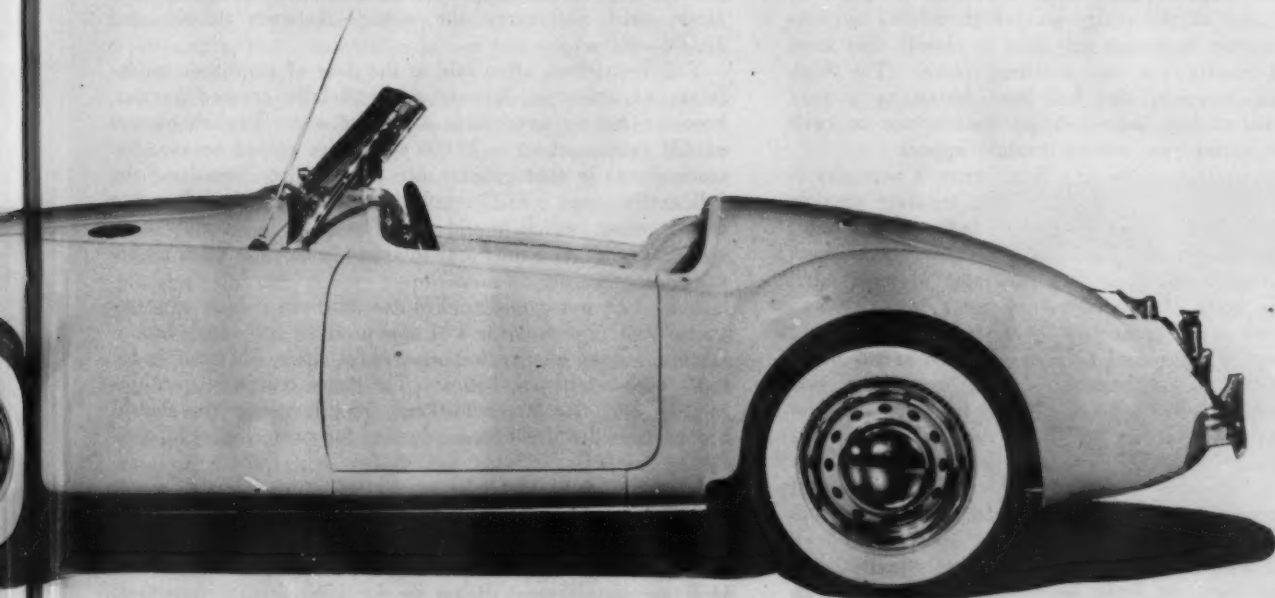
So much for genealogy and specs. This is an exciting development for the enthusiast. As can be seen, the new MG body is a beautiful example of the coachwork we've come to expect from across the sea. Retaining only the familiar design (if not shape) of the grill, the "A" boasts a two-seater streamlined body with enclosed luggage compartment; indepen-

dently adjustable bucket seats with foam rubber cushions and backs that are fitted in leather (red, green, grey or black); and the usual MG extras in the way of side-screens, folding top, spare wheel, jack and tools.

The choice of exterior color ranges through black, Orient red, Tyrolite green, Glacier blue, and Old English white (that's what the man said).

This is a handsome job which should show up well in the road testing we have scheduled. There is a strong desire to shout, "The Prince is dead; Long live the Prince." We feel the heir apparent has a long and successful reign before him.

(Continued on page 57)



highway

hi-fi

By Ben Zale

HI-FI, which some call a new and strange disease that afflicts the human ear and others the greatest invention since the discovery of the wheel, is now available for the sports car too.

A word of introduction for those to whom the term, high fidelity, of which hi-fi is a commonly used abbreviation, is completely meaningless. High fidelity, as reproduced sound or music, means the best, most natural reproduction possible. The goal of hi-fi lovers is sound so natural that listeners will think and feel that they are hearing real musicians and singers rather than a record, or tape, or broadcast. Some of the really good high fidelity systems now on the market approach this goal so closely that most of us would hardly ask for anything more. The high fidelity addict, however, who has been bitten by a very virulent species of bug indeed, is hardly one not to cavil at a trifle, no matter how minute it might appear.

Some of the equipment the hi-fi fiend terms a necessity is the following: FM tuner, power amplifier, separate speaker system in large corner horn or infinite baffle or ten cubic foot (at least) bass reflex cabinet. The latter is an item occupying as much space as the back seat of most cars, and the entire body of a good many sports cars.

Obviously, we aren't going to be able to get the cumbersome equipment we've named into a sports car, or any other car for that matter, without dislodging everything else in it, including ourselves. So, if we still insist on the best possible sound reproduction within the spatial limits that we've set ourselves, we will have to compromise. Since a good many of us have already compromised with small rooms in small apartments, and achieved very respectable results in reproduced music despite the compromise, we can hope and will indeed be able to achieve equally good results in our cars, at little more than the cost of an ordinary car radio.

Let us consider, first, the audio components which we have listed above as necessities for our mobile high fidelity sound system: an FM tuner, power amplifier, and speaker

with proper enclosure. Why, to begin with, do we specify an FM tuner as part of our set-up?

Inherently, FM, aside from the fact that it is not affected by electrical disturbances in the atmosphere, which create static, is not superior to AM. FM, or frequency modulation, is assumed by many high fidelity listeners to be fuller and richer in sound than AM, amplitude modulation. FM, they will say, reproduces the entire range of sounds that can be heard by the human ear from the very deep bass sounds at 20 to 30 cycles per second, to the very highest treble sounds at 16,000 to 20,000 cycles per second. Whereas AM, they will point out, is restricted in its audio range to approximately 10,000 cycles. AM, they will truthfully conclude, will not carry the sounds between 10,000 and 20,000 cycles.

This restriction, often laid at the door of amplitude modulation as a system, is only an artificially created barrier, however, not by any means a natural one. English owners of AM radios get up to 20,000 cycles per second because the transmitters in that country are permitted to broadcast the full audio range. FCC regulations here prevent full range broadcasting, which would cause stations to overlap each other's broadcast bands and interfere with each other's programs.

This does not apply to FM transmitters, which are sufficiently far apart on the FM dial to allow full range broadcasting. That is why we must insist upon FM tuning for good high fidelity reception. The noise rejection qualities of FM reception are additional gratifications, but should not be considered the basic reason for preferring FM over AM.

In addition to the FM tuner, we must have a power amplifier, which will take the very small electrical signal presented to it by the tuner and build up its strength sufficiently to produce adequate sound volume in the speaker. Ordinary amplifiers will not do for high fidelity purposes, however. In order to reproduce the sound from the FM tuner properly, the amplifier must have a very low distortion level, combined with high gain and adequate frequency range. About the only thing that can be said of



ordinary radio amplifier systems is that they have adequate gain and reasonably good distortion levels and frequency ranges at very low listening levels.

In contrast, power amplifiers in home high fidelity systems produce the entire audio spectrum from 20 to 20,000 cycles with very little distortion, so little that only the most sensitive measuring instruments can detect any at all in the best systems. Home amplifiers, of which almost a countless variety are now available, will not do for the automobile high fidelity system, however, since the majority are too bulky and require more power than car batteries can supply.

Here again we must compromise in order to achieve some measure of the high fidelity sound which is our goal. Fortunately, the compromise is not too severe, as we shall shortly see.

Finally, we need a high fidelity speaker, with a range of from 50 to 15,000 cycles if possible, in a proper enclosure. The reason for the enclosure, for those to whom high fidelity sound is unfamiliar, is to allow the speaker to produce the best sound of which it is capable. When a speaker produces sound its cone is seen to be vibrating and moving both backwards and forwards. That is because electrical impulses from the power amplifier are passing through a circular wire voice coil to which the cone in the speaker is attached. The coil surrounds a permanent magnet which is parallel with the cone's axis. As the signal current passes through the coil it sets up magnetic fields which react with the magnetic field of the permanent magnet, causing the voice coil to move back and forth along the axis of the magnet. Since the cone is attached to the voice coil, it will also follow the fluctuations of the electrical current from the amplifier and will move the air surrounding it backwards and forwards as determined by the audio signal.

Distortion sets in when air waves from the back of the cone meet air waves from in front of the cone at its outer edges. When this happens, cancellation of sounds in the frequency range below about 120 cycles occurs and bass is

(Continued on page 55)

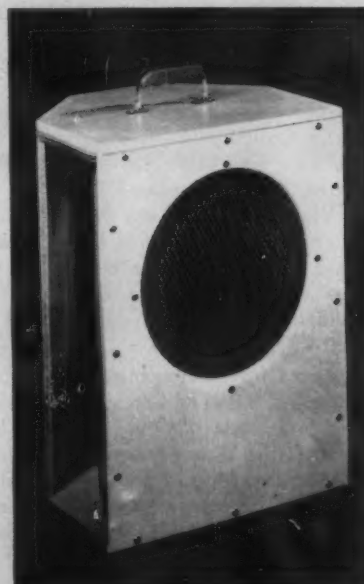


Finely finished cabinets may be used to match car interior. Dimensions as small as 10" x 10" x 8" are available.

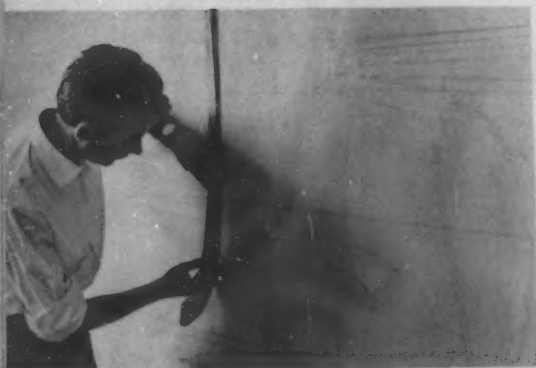
Hastings FM tuner is especially designed for use in cars and will give true high fidelity reproduction when used with matching components.



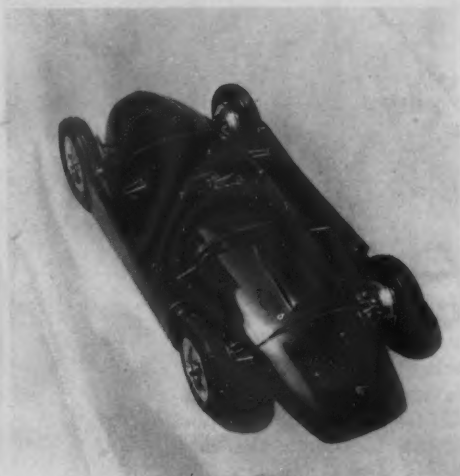
Kits are available for all types of speaker enclosures that are designed for minimum space and best sound quality.



Design department produces drawings to be approved by the client and used for full scale drawings.



Full scale mechanical drawings are based on a finely detailed model.



Models are precise replicas of the finished car done to exact scale by Vignale workman.

Vignale di Torino...

By BOB MOTTAR

ALFREDO VIGNALE has his finger in practically every pie as far as the construction of the sleek, automobile bodies which come out of his Torino work are concerned. He helps sell the idea of a Vignale body to a client, he assists in designing the body, and he fathers the body through its construction.

Alfredo's business got off to a very modest start in 1946 with a net capital of \$48. His first shop was a small room in a crumbling house in Turin, Italy, where he built bicycle fenders and made modifications to motorcycle bodies, such as they are. He was joined by his brother Joseph within a few months, and, as business improved, by a few friends. Alfredo Vignale & Company now numbers 87 employees, and though its current shop is larger than anything Alfredo might have dreamed of when he started, the shop's capacity is strained to the point that some of the finishing operations on Vignale-bodied cars are done on the street in front of it for lack of space inside.

Most successful businessmen have a tendency to retreat to oak-paneled, air-conditioned offices, the doors of which are labeled "President". Such has not been the case with Alfredo Vignale. Enter the Vignale works, seek out the tie-less, shirt-sleeved man expending twice the number of foot/pounds of energy as any of the others, and you've found Alfredo Vignale. The extent of his supervisory work

there is boundless. His job as head of Pinin Farina's bodyshop for five years was not unwarranted, and his knowledge of what can be done on the order of bending, forming and joining metal into precisely desired shapes is exemplary. But overseeing and supervising the metal sculpture of a Vignale hand-built body is but one of his jobs: In Italy, the coach-builder takes a naked chassis and engine and, when he's finished with it, all the adornments inside and out are his baby. This means lights, upholstery, instrument panel and instruments, grill, paint, etc., in addition to the actual body which he's made for it. At Vignale & Company, Alfredo has delegated himself a committee of one to see that everything that goes into a Vignale body is right.

Most of us harbor a sub-conscious desire for our "own" car: a body which is, if not completely, at least in part, one of our design, concealing those mechanical components of our choice. Not so Alfredo Vignale! "Alfredo's passion for autos begins and ends with his coach-work," says his brother Joseph. "He doesn't own a car, won't drive a car, and only rides in one with great reluctance. He's much happier on the tram." Perhaps Alfredo's attitude reflects a basic distrust for anything propelled by an internal-combustion engine dating back to a motorcycle accident he had some years ago.

In his spare time during the early days of his business, Alfredo built an aluminum body for a Fiat "500", a small two-seater more commonly known as the "Topolino", or

craftsman

designer

artist

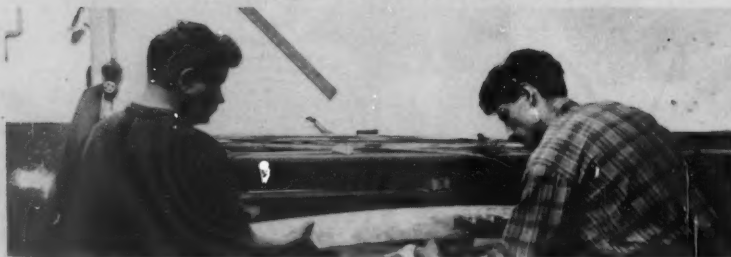
visionary



\$58.00 and endless energy were the start of Vignales fortune. Though no two of his cars are exactly alike, he sacrifices production line symmetry for the Vignale "touch". Greatest number of cars produced in a group are fifty.

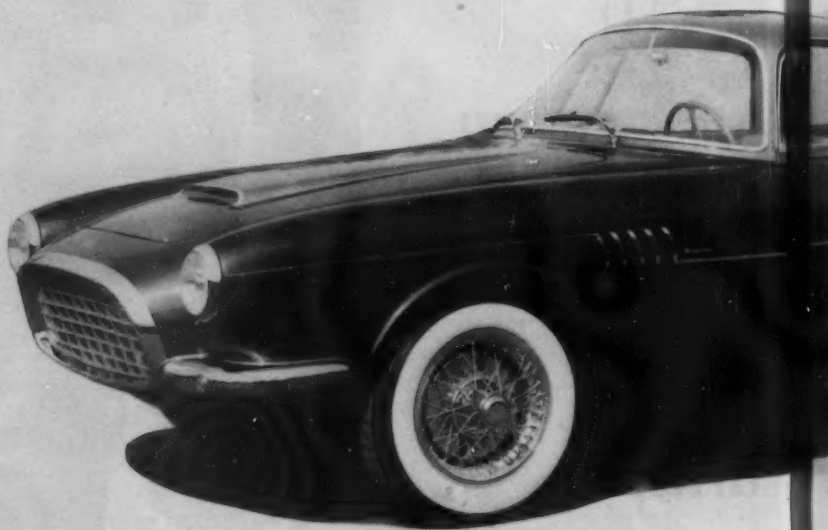
Coachwork by

Drawings are transferred to sheet metal for forming to shape and cutting to approximate size.



Body parts are formed by hand and individually fitted to frame. No two parts are precisely alike.

frick cunningham lancia bentley mg cadillac
rolls-royce
nardi
fiat
maserati
siata
ferrari
alfa romeo
osca



'mouse' to the Italian public. This marked the birth of the first "Vignale" body, and it was immediately bought by a car dealer in Venice who was so delighted with it that he placed an order for a half a dozen more. Within a few years Fiat agencies throughout Italy were placing orders with him and, within the past month, he's received a contract from the Fiat Company itself for making two hundred taxis of Vignale and Company design.

To give credit where credit is due, however, the final design of Vignale bodies for some years has been the work of Giovanni Michelloti, a 34 year old Italian designer working in close collaboration with him. The two met when both were working for Farina, and have been close friends ever since. It was on Alfredo's suggestion that Michelloti left Farina's design department to establish himself as a free-lance industrial designer concentrating primarily on auto bodies. Like most other key figures in the Italian coach-building business, Michelloti has had no formal training in either automobile design or construction, having acquired his present stature in the field through practical training coupled with some slightly remarkable innate ability.

Though he designs bodies for other coach-builders as well as Vignale, he never accepts a car designing job without first getting Alfredo's approval, his loyalty stemming from the fact that Alfredo provided the impetus for his current success. Alfredo has never suggested he turn down work from competing coach builders to date, with the result that Michelloti-designed bodies could be found all over the 1955 Turin Auto Show.



Welding is a two-man operation, one man must hold the work in position.



Exact size is achieved by the use of simple hand tools and a lot of patience.



Craftsman puts smooth counters into body by painstaking hand work.

Unlike other coach-builders', the bodies of Vignale are sculptured to their framework. This eliminates a step which Alfredo Vignale scornfully refers to as "so much waste motion:" the making of wooden forms over which most limited production bodies are built. It does call for considerable more skill in the forming and shaping of the individual body panels, however, and though it's probably true that a Vignale body is not identical on both sides, who sees both sides of a car at the same time, anyhow?

The individual steps in the design and construction of a Vignale body as a result follows this unique pattern. Alfredo and Michelotti discuss the potential design of a car. Michelotti then retreats to his studio and, after a few sketches, renders a water-color paint of the car. This he shows to Alfredo, and if Alfredo likes it (which he usually does), Michelotti returns to his studio where—thumbtacking the small painting to a wall for reference—he immediately turns out a full-scale, technically perfect drawing of it from which Vignale body-men can build the car.

Because of his Farina background, brother Joseph Vignale originally assisted Alfredo in body-work when he joined the company. A business being no more stable than the books it keeps, however, commercial subjects he had studied in his school days proved of considerable more value to the expanding business. He now handles all of the company's business problems assisted by his wife, leaving Alfredo completely free to handle the production aspects.

Cunningham visited the Vignale works before the 1952 LeMans race at the suggestion of Luigi Chinetti, the New York Ferrari dealer. Before leaving, he had placed an

Interior is hand-cut then rough stitched by machine. Final fitting into the chassis is hand-done.





Customers' choice in upholstery is hand-fitted to custom-made seats.

Youthful apprentice will spend many years with his tutor before being trusted to do body rigging.



order with them for 23 bodies to be fitted to the cars he was then building in West Palm Beach, Florida. The design they came up with was in keeping with the Cunningham cars' remarkable performance, one of them being featured as "a work of art" at a Museum of Modern Art exhibit in New York the following year. Briggs was apparently dressed somewhat informally at the time of his call to the Vignale works. According to Joseph Vignale, the work's concierge came running up to him to announce the arrival of a cowboy! The last Cunningham car they built a body on left their works in the winter of 1953.

Along with Cunninghams, they've built bodies for: Fiat, Alfa Romeo, OSCA, Maserati, Ferrari and Siata. They recently made a body for the "Volvo", a not too well known Swedish marque, and they say that if they can resolve differences over production prices of the car they'll build two hundred more. Most of their production work, however, continues to come from Fiat agencies rather than automobile companies, most of whom have their own design departments and assembly lines and prefer building their own bodies for reasons of economy.

The Alfredo Vignale & Company is among the avant garde of coach-builders in borrowing heavily from the aerodynamic school of design. Indicative of the Vignale-body-to-come is one they recently made for Nardi, the Italian speed-equipment manufacturer and competition-car builder, which won wide acclaim in the last Turin show. If it's a wingless aircraft you're after, may we direct you to the works of Alfredo Vignale.



Interior details are stitched out of hand-cut patterns in Vignales leather shop.

A black and white photograph of Jackie Cooper, a racing driver, looking down with a weary expression, holding his head with his hand. In the background, another person is partially visible, also appearing to be in a state of exhaustion. The setting appears to be outdoors, possibly at a racetrack.

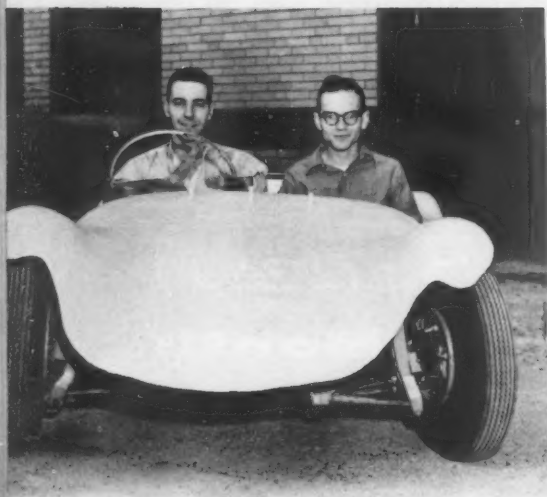
auto sportsman Of The Month

Jackie Cooper, one of racing's avid enthusiasts, shows strain after the tortuous 12 hour 1955 Sebring event. Driving an Austin-Healey Jackie placed 44 out of a starting field of 84 cars.



George B. Woodruff

Sports Cars by Degree



Finished product represents months of work and years of theorising. Car will be taken to California for the finishing touches.

A COUPLE of enterprising young seniors at Massachusetts Institute of Technology have built a sports racing car of their own design as physical proof of their theoretical ideas. The project was part of their graduation thesis.

Carle C. Conway III, of Pasadena, Calif., and George D. Cheney of Saxton River, Vt., have put together a sweet little car in pursuit of their own immediate goal—graduation.

Accepting some help from fellow students during construction, they avoided professional assistance except for a little aid in the machining of the rear axle shaft.

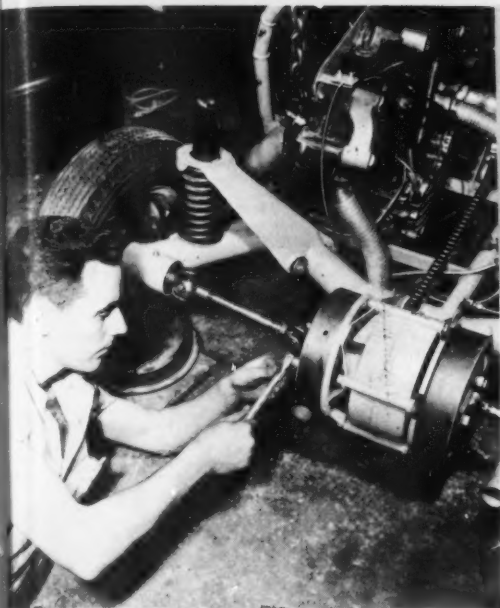
The car is designed for American competition with 0 to 60 mph acceleration in 12 seconds and a maximum speed of 115 mph. The independent suspension was designed by the students. Engine is an American built 80 hp motorcycle job, air-cooled and drives through a chain linkage. The English built transmission is lined up transversely.

Body is of fiberglass, designed and molded by Carle and George themselves. It weighs just about 55 pounds. Overall dry weight of the car is 800 pounds sitting on its 4:50 by 12 tires. The frame consists of large diameter thin walled tubing.

M.I.T. is kind of proud of its undergraduate sports job. So, are its builders.

Degree granted.

—★—



Chain drive is used to couple two-cylinder engine to rear end. First test on the car was made before the chassis was fitted.



Hydraulic positioners rather than mechanical linkage are used to position the clutch.



Independent suspension is calibrated by Conway. Chain hoist lifts car off the ground instantly for adjustments.



Steering utilizes short chain drive easily adjustable to driver's touch. Note transverse leaf spring across front end.



Featherweight fibreglass body is easily handled. Super lightweight construction is responsible for cars startling performance.



Your Twelve Best Buys *in foreign cars*

By Herbert Keppler

THE YEAR 1955 has been one of the hottest sales years in the history of foreign cars in America. It saw the German Volkswagen widen its lead over the British MG, Austin, Hillman and Jaguar. And it saw the sales picture for all foreign cars show signs of an even greater year ahead.

Millions of Americans whose eyes used to turn automatically toward Detroit when the question of a new car came up, are now looking toward Wolfsburg, Germany (home of the Volkswagen).

But purchasing a foreign car takes a great deal more planning than buying a Detroit vehicle. Each make has its own personality and you can very easily find yourself piloting the wrong breed. It's not only a matter of taste—it's an art and a science. And the time to wonder where your wife and children will sit is *before* you buy the car, not after.

Do not buy a car you cannot afford; you may find the repairs will be less frequent, but there's always the upkeep. And then—the small paint chip which would not bother you on an American job will rankle when you own a European car. You'll want enough

reserve in the bank to keep the car in perfect condition—there's no sadder being than the sports car owner with a crumpled fender he can't afford to repair.

While cost is important, you must also look for something a bit more nebulous in nature—something called value. And value is a function of your own particular perspective. If you are looking for maximum economy, perhaps a Volkswagen or an MG is what you should buy. But, if you're also looking for a family car, certainly the MG is not for you. The Jag, an outstanding value in a competition car that can also take you to the station to catch the 8:10, is not the right cup of tea for the conservative country doctor who doesn't want to disturb his RFD patients.

In short, your best buy in car imports is not necessarily the cheapest, the fastest or the most conspicuous—it is the car that serves your particular needs best at the lowest price.

So, with those considerations taken into account, Sports Cars Illustrated presents your best buys in car imports.

Exciting new models offer the prospective buyer more than ever before. Be careful—buy to fit your needs.





RENAULT 4CV

When you see four large people place a huge cargo of luggage in a rack atop a car 12 feet long, then carefully fold themselves into it via four doors, it is no circus act. It's a Renault, produced almost without change by a French government owned factory since a bit after the last war. No speed demon, it will run nicely at 55 or 60 mph all day. The purring engine sounds a bit like a sewing machine but it resides in the rear of the car where it is seldom heard from while the car is in motion. A heater is provided

in the list price of the car. The absolutely flat floor within the car is possible because there's no need for a driveshaft from front to rear. The hood in front lifts. Underneath is a bit of space but not really enough for much luggage since the spare tire is carried there. If you're looking for economy, this is it. The Renault is one of the world's most economical cars to own and, obviously, a dream to get through traffic and to park. \$1195*

*All figures mentioned are New York City prices.

ANGLIA (British Ford)

If you're after a small car with big-car performance, a family car with a touch of sports car cornering, don't overlook the Anglia. This four-cylinder, four-passenger job reminds you of a small dechromed American car. Its compact little 36-hp engine may not allow you to zoom off ahead of that Jag, but on winding and hilly country this little English Ford will do more than keep up with its Dearborn relation. Servicing, by the way, is as near as your Ford dealer—English and American parts being interchangeable. And such a lovely price, too. \$1398



HILLMAN HUSKY

A tough, versatile little chunk of transportation is the Hillman Husky station wagon, gaining new acceptance as a maneuverable, economical family run-about.

Rootes Motors has produced this car with the American Market definitely in mind. It's not a gaudy show-off car in looks or performance. The Husky is a really unique automobile, something of a hybrid between a four seater sedan and station wagon. With rear seat folded, you have plenty of luggage room; enough for a small truck. With four up, there's still sufficient space for everyone. If the lady in the family raises her voice against most European cars because of luggage space limitations, the Husky will be sitting in your garage before you know it. Though no bundle of fire on the road, its 39 bhp will keep it stepping in the 60 mph class even when fully loaded. \$1,455





VOLKSWAGEN

Many a young couple with a family in mind have been seen waving a fond adieu to their two seater sports and then climbing into a Volkswagen. And there have been few regrets. The rear mounted, air cooled 36 HP engine will push the aerodynamically-shaped four seater all day long, and night too, at 60 to 65 MPH with a fuel consumption of 33 gallons or so. Air-cooling eliminates dangers of cracked radiator blocks, problems of anti-freeze. Independent

wheel suspension all around gives the VW a smooth ride totally unlike any other small car. It corners very fast, with little tendency to slide or drift. VW owners report few repairs are necessary and hop-up kits keep the mechanically minded owner busy. Luggage room in the front along with the tire is not over commodious. You may want a top rack, unless you prefer the sun roof or convertible VW to the sedan. But it's one of the best all round buys—if not as a first car, at least as a second. \$1,575 with sun roof.



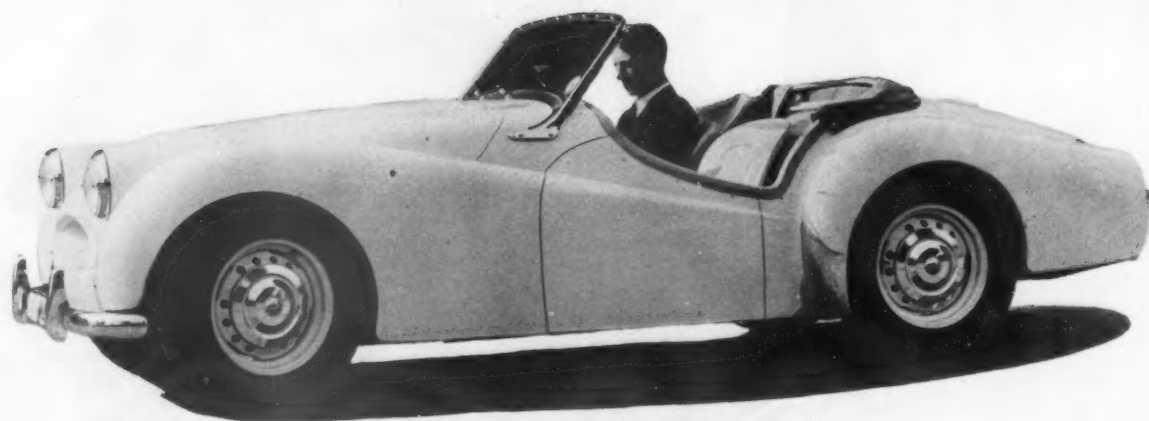
AUSTIN A50 CAMBRIDGE

The Austin is a standard British family sedan which has received wide acceptance here after achieving an indisputable lead at home. Easy to shift with a new hydraulic clutch of the dry-plate type, the good power-to-weight ratio makes for fine pickup. And there is no foreign car with a comparable repair and service organization in the United States. Although the name Austin has come to be almost synonymous with small, inexpensive cars, you'll find that the top price end of the line includes some pretty impressive sedans with special coachwork by famous British makers. However, the A50 Cambridge is a big little car, roomy and comfortable although much smaller than American medium-bracket autos. It boasts a 1500-cc power unit which turns up 50 hp. You won't win any road races at its 60-65 mph cruising speed, but the car takes rough handling and constant use beautifully. It's a best buy for those who are looking for solid utility in the city or country. \$1,895

MG "A"

For a little over \$2,000, including extras, you can acquire more than a pound per dollar of one of the safest, yet sweetest handling jobs ever produced for general use. It provides excellent basic training for handling a sports car, and is an economical entree into competition. Service facilities are widespread. The previous model seen in this country, the TF 1500, was the somewhat streamlined successor to the equally rugged and famed TC and TD series. Now the years have finally caught up with the classic design of the MG. The new MG "A" keeps the MG radiator design, basic engine and little else. Old MG owners may argue, but the new envelope-designed body will get you there as safe and a little bit faster than the old models, to paraphrase an MG slogan. If you yearn to be an MG owner and have a family, better look into the MG Magnette, a beautifully constructed sedan with the same engine. \$2195.





TRIUMPH

For the driver interested in the MG specifications, there is also Triumph's TR-2 to consider. About two years on the American market, this job has achieved wide acceptance for its remarkable performance characteristics. The excellent acceleration is complemented by positive acting, competition-minded brakes. The TR-2 is fine to handle for both fast touring and track demands. It is equipped with Laycock-de Normanville overdrive, an 8.5 to 1 com-

pression ratio, is noted for quick, even starting with the absence of flat spots during pick-up, and wisely chosen gear ratios. A light car, this auto is good for your gas budget. A really tight turning radius and small size spell real maneuverability. The two-seater body won't win a concours prize, but with 0 to 60 mph in just over 10 seconds, an over 100 mph top, and a good chance for the checkered flag in class "E," it's a fine buy. \$2,495

AUSTIN-HEALEY

Here's a really fine bargain for the owner who believes more than two is a crowd. For less than \$3,000 you get a really luscious envelope body, built by Austin, a full racing chassis of orthodox but rock-sturdy design conceived by Donald Healey, a 90 hp engine which isn't really working hard when pushing the car around the 100 mph mark, and all sorts of wonderful extras. Those knock-on wire wheels, the electric Laycock-de-Normanville overdrive (finest ever designed) tonneau cover, heater, directional signals—they're all standard equipment included in the delivery price. The luggage room really holds an American's idea of baggage for two, while the cockpit is roomy enough to stuff a great deal more. Body construction makes repairs inexpensive. Most envelope bodies are difficult to work on, but not the Austin-Healey. The car's roadability is second to none, acceleration terrific, comfort excellent. \$2,985



PORSCHE SPEEDSTER

If you want something far advanced in styling, yet inexpensive to run, your best buy is a Porsche. Somehow the ingenious Dr. Ferdinand and his son Ferry Porsche have succeeded in giving us a sports car capable of over 100 mph with a 1,488cc power plant putting out 55 hp. This is mounted in the rear of an all-aluminum aerodynamic body, independently sprung on four wheels. If you're thinking of racing, rest assured that you will seldom see any cars ahead of you in your class—except other Porsches. Two jump seats make it a family car, too—fine for two adults and two children although luggage room in front with the spare tire just isn't enough. Repairs and upkeep on Porsches is remarkably low. \$2,995





JAGUAR

The Jag, in its price range, is a world-wide sales leader—and little wonder. As a competitor it has come home victorious time and again in the European Grands Prix, in national events, and in timed track tests. There is no comparable marque at the price. The 3½ liter engine has been pushed up to 190 bhp. this year from 160. Nothing made in Detroit or elsewhere for less than twice the price will get ahead of you unless you let it. The latest models

with the additional seating capacity (all were just two-seaters until last year) make what was strictly a twosome car into a possible family affair. Certainly the luggage compartment will hold enough for four. Actually, however, the additional seats are about child-sized, but one full sized adult can be happy in them for long rides. The XK-140 corners better than ever, has all sorts of accessory speed and eye appeal equipment available as extras, \$3,450



MERCEDES-BENZ, 300 SL

It's hard to think of any car costing \$7,295 as a giveaway bargain, but that's what the 300SL model is. It has elegance, unexcelled craftsmanship in body and engineering, amazing roadability at extreme speeds, a 2,996 cc engine developing 240 hp, wonderful comfort for two and a top mark of over 140 mph. Brakes are about the best to be had. Wind noise at high speeds is almost nil, ventilation excellent although the wing type doors and non-roll side windows may puzzle you awhile. The fuel injection system which replaces the standard carburetors used in all other cars may not be meat for your neighborhood garage mechanic but it's the very latest in advanced engineering. Properly handled, no sports car now being built on a production basis can beat the 300SL on a track. \$7,295

ROLLS-ROYCE

Best buy in all the world is the Rolls-Royce. Money no object, of course. Here's the most fabulous piece of machinery in the automotive kingdom all wrapped up with a three-year guarantee. Two basic chassis—Silver Wraith and Silver Dawn—are equipped with six-cylinder, 4,566-cc power plants. Interior appointments, like the rest of these custom works of art, are perfected by master craftsmen. Prices range from \$12,000 up . . . up . . . up.



Sports Cars Illustrated

goes

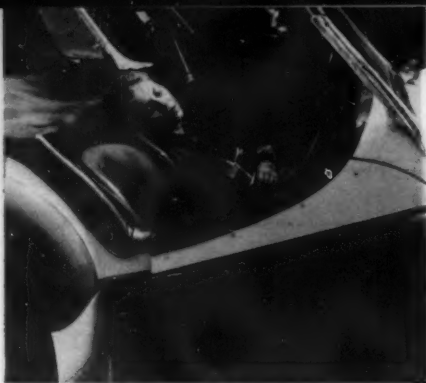
Dicing in the dark



Time exposure leaves behind
lights of first car away
from start as others move
up to get friends' encouragement.



Neon strip of light winds up
mountain road. Harsh terrain
is bathed by subduing moonlight.



Cockpit becomes cradle as grueling drive through the night ends in complete exhaustion for some.

By JIM MOURNING



Photos by Rolofson

THE admission of an enthusiasm for rallying is often construed by the uninitiated as an admission of questionable sanity. To indulge in this type of activity in the dead of night seems to confirm any doubts on the score. Despite this, night rallies, running from four to twelve hours, are growing increasingly popular.

To those who have withstood the frustration and disillusionment of daylight rallying, there is some compelling fascination in the thought of flying through the night, roaring along in the narrow path of light carved by their own headlights.

Even those who are not rally addicts during the brightly lit hours find a strange satisfaction, an added touch of glamour, in night rallying. Thundering into a lone spot of light amidst black shrouded mountains seems enjoyably different from making the same stop under a blazing sun. The rumble of exhausts that fills the canyons seems to carry the echo of romance of big time competition, European style. And the final legs, run through the grey light of dawn, seem even more adventurous and exciting.

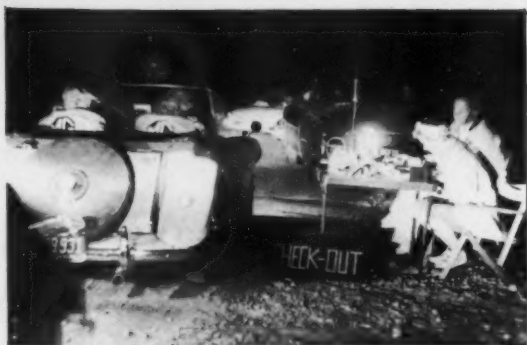
Yet every phase of rallying is made more complex. Road signs are lost in the blackness of the night. Narrow side roads are difficult, often nearly impossible, to spot. Even the normal business of calculating is made extra difficult under the faint light in a bouncing car. The competitors show the added strain. Jaunty teams that roared gaily away from the starting line pull into the final check, tired and on edge, with dark circles ringing their weary eyes.

Because of the added difficulty, the competitors are proud to have run the event. Win, lose or draw, they will talk of experiences with a touch of pride in their voices for many days. They are proud of the difficulties they had to overcome to finish, of the extra preparation that went into the running, of the ability to perform under the most trying of circumstances.

A fine example of a night rally is the recently held Rallye de WHEEL Bounce, one of the toughest of California's increasingly numerous after sunset affairs. With last year's complaints still hanging in the air, 211 cars boomed away from the starting point, establishing a new record for number of entrants in a West Coast rally and putting it in serious contention with major rallies throughout the U.S.

As the flag fell, the cars shot between a double row of spectators and roared away through the still congested streets of Los Angeles, out along the ocean and into the mountains. As the stream of traffic thinned, then all but disappeared from the road, they sped through the towns that dot the California desert, whipped into the mountains beyond and wound back down into the San Fernando Valley some 12-14 hours later.

With the sun creeping high in the heavens, the finishers trailed into the final check and the competitors began the seemingly endless wait for results. For the lucky few there were trophies to brighten their mantelpiece; for the majority, a pat on the back and a murmured "good try."



Radio car at check-point provided communication, a constant time check. Headlights supply illumination.

COR



duroy..

newly important for sports car wear



Corduroy by Crompton equipment, Abercrombie and Fitch

By LOIS DE BANZIE

WHAT does the newly-important corduroy have to offer? . . . just about everything that's good for a man's comfort, both physical and monetary.

We say "newly-important" because of the meticulous tailoring it is being introduced to, the up-to-the minute styling (for men and women) that it takes to so well.

Corduroy has come a long way from the time it was used almost exclusively for carelessly cut, rather baggy jackets—good for digging the garden in and other such workaday tasks, or wearing when taking the dog out for a walk, preferably under cover of darkness. The idea of wearing corduroy on a more social occasion was out of the question—it just wasn't made into clothes of that kind.

But now it has come up in the social scale—*now* corduroy is blossoming forth as an all-occasions, all times, kind of material. You will see it worn by executives, men-about-town, TV directors, staunch pillars of the Ivy League, sports enthusiasts, Madison Avenue exponents, and pretty girls. You will see it worn at parties, on the beach, at sports car races, board meetings, and track meets.

This all-things-to-all-men material doesn't seem to get baggy any more, either. The new, slick tailoring sees to that. It's cut to fit, and it stays that way.

If all these facts have you feeling there must be a catch *somewhere*, we haven't found a one—even the basic delight of corduroy is with us yet—it is still inexpensive. And if you'll judge corduroy by its durability, variety of color and pattern, its easy-to-care-for qualities, and reasonable price range, there is little doubt you will agree with us that nowadays, corduroy is a better buy than ever before.



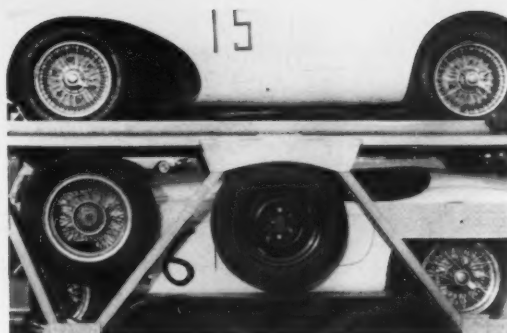
Photographs by Lester Bookbinder





4

Jim Pauley at speed
in the ex-Rubirosa Ferrari
Mondial. Jim took the
checked flag in the
fourth race.



Briggs Cunningham's double-decked trailer carries his OSCA and Jr s. 2.9 Ferrari.

records fall at THOMPSON

An outstanding example of just how safe and sane racing

Tense competition and the will to break records made the day's racing look like the beginning of the season instead of the end. John Meyer, of Great Neck, L. I., broke his Meyer-Cadillac Special into the lead at the start of the unrestricted competition and was never seriously threatened. His average speed for the class was a neat 69.47. Old record: 67.92. The MG event showed that a well set up TC is still a car to be reckoned with. Setting a new record with 67.87 mph average, George Valentine, of Poughkeepsie, N. Y., set the pace with another TC running second, and TD's in third and fourth positions. All first five cars in this event broke the old 58.47 record. Pupildy in a white Porsche broke the records with 64.95 in the Class F Production race, the second of the day. In the eighth race for Class G Modified and Class H Modified Over-All Len Bastrup of Wilton, Conn., won without trouble, shattering the old record of 64.74 mph with a new mark for the drivers to shoot at —67.08 mph.

By Irv Dolin



Straining for something different this photographer focuses on Len Bastrup's Lotus-Climax.





can be, the Sept. 4th competition at Thompson, Conn. may well be studied by all involved in the sport



Pool Leads the pack as Bastrup's Lotus, Dominiani's Giaur and Bentley's Abarth push hard.

The rolling mile and a half roadway was lined by an enthusiastic crowd. Undeterred by the recent floods and constant detours which they had to make to get to the course the young crowd lined the stands and remained through the long day's racing without becoming bored or leaving early as sometimes happens at other events. It was not only the falling records but the competitive driving which kept the crowd watching. Bob Bucher had fought his way into second position in the unrestricted seventh race coming into the sharp grandstand turn. There, fighting the leader, his red Allard went into a spin and the cars whizzed by him. Fighting back from the eighth position he moved to his gas pedal and delicate weaving and recovered to a seemingly impossible second as the cars crossed the finish line. A big V for five on the side of a Porsche 55 Spyder driven by Walt Hansgen, who is usually seen in larger cars, won the crowd-pleasing sixth race. The V meant Victory as Hansgen moved in just four laps from fourth position to the award of the checkered flag.





Battle of the Bandini's, Vilardi leads Rudkin and went on to take second in class H modified. Dominiani runs a lone race cutting corners sharp before he retired. Otto Linton and crew push the disabled OSCA on to the trailer. Jim Pauley gets some relief from the day's bright sun under an umbrella hat.



Linton's Ill-Fated OSCA was first to break out and take an early if short-lived lead.

(All Races 10 Laps, 1 1/2 Miles per Lap)

First Race—Class G Production

1. George Valentine (M. G.-TC); 2. Henry Wilardi (M. G.-TC); 3. Gus Ehrman (M. G.-TD). Time—60 m. p. h. (record)

Second Race—Class F Production

1. E. Pupildy (Porsche); 2. Lake Underwood (Porsche); 3. Paul Flickinger (Porsche). Time—64.95 m. p. h. (record)

Third Race—Class D Production

1. Arthur Simmons (Mercedes 300 sl); 2. George Arents (Mercedes 300 sl); 3. Byron Roudabush (Mercedes 300 sl). Time—64.87 m. p. h. Austin-Healey section: 1. Harold Kunz; 2. Malcolm Donaldson; 3. Gus Ehrman. Time—63.26 m. p. h.

Fourth Race—Class E Production and Modified

1. Jim Pauley (Ferrari Mondial); 2. Dave Michaels (Bandini-Offy); 3. Charles Rutan (Arnold-Bristol). Time—67.70 m. p. h.

Production

1. Gaston Aubrey (Morgan); 2. Capt. M. C. Ashley (Morgan); 3. Ben Dane (Morgan). Time—64.65 m. p. h.

Fifth Race—Class C Production

Jaguar M and MC section—1. DICK THOMPSON (XK 140 MC); 2. Bob Bucher (XK 140 MC); 3. Harry Carter (XK 140 MC). Time—65.95 m. p. h. Standard Jaguar, Corvette and Thunderbird section—1. ADDISON AUSTIN (Corvette); 2. Peter Sparacino (Thunderbird). Time—61.07 m. p. h.

Sixth Race—Class J Modified

1. Walt Hansgen (Porsche 550); 2. Jim Pauley (O. S. C. A.-Offy); 3. William Eager (Lester MG). Time—67.90 m. p. h.

Seventh Race—Unrestricted and Class B Modified—Unrestricted

1. John Meyer (Meyer-Cadillac Special); 2. Bob Bucher (Jr. Allard); 3. Philip Cade (Maserati-Chrysler). Time—69.47 m. p. h. (record). Class B Modified—1. Stewart Rutherford (Chrysler-Allard J2); 2. John Sinclair (Jaguar Cadillac); 3. Herbert Ambler (Cadillac-Healey). Time—68.15 m. p. h.

Eighth Race—Class G Modified and Class H Modified Over-All

1. Len Bastrup (Lotus); 2. Candy Poole (PPV); 3. John Bentley (Abarth, Class G Modified—1. Bastrup; 2. Bentley; 3. Richard Matthews (MG Special (MG Special). Times—67.08 m. p. h. (record). Class H Modified—1. Poole; 2. Dolph Vilardi (Bandini); 3. Hal Stetson (PBS). Time—64.98 m. p. h. (record).

Ninth Race—Classes C and D Modified 67:05 m. p. h.

Class C—1. Duncan Black (Ferrari 4.5); 2. Jack Crusoi (Jaguar XK120C); 3. Preston Gray (Ferrari 4.1). Time—70.83 m. p. h. Class D—1. Bill Lloyd (Maserati 300); 2. Traver McKenna (Austin-Healey 100S); 3. Vincent Sardi (Austin-Healey 100S). Time—71.29 m. p. h.

Tenth Race—For All Who Averaged Over

1. John Gordon Bennett (Maserati 300S); 2. Bob Bucher (J. R. Allard); 3. Duncan Black (Ferrari 4.5); 4. Stewart Rutherford (Chrysler-Allard J2); 5. Preston Gray (Ferrari 4.5); 6. Dave Michaels (Bandini-Offy); 7. Jim Pauley (O. S. C. A.-Offy); 8. Briggs Cunningham (O. S. C. A.); 9. Walt Hansgen (Porsche 500). Time—71:17 m. p. h.



About Sports Cars

by Dave Ash

THE question that has been asked of me more than any other about sports cars is: "How can I make it go faster?" Since the answer applies to all sports car owners the answer is one of importance, it is simply this: "Leave it dead stock, keep it as clean as you possibly can, tune it razor sharp, follow the owners manual to the letter, and learn to drive it correctly."

There is nothing original in this answer. In the pre-war days when Prince Bira of Siam was mopping up British racing along with Raymond Mays, a young Maserati owner came to him one day with the same query. Bira was extremely successful with his 'Maser' and the youth thought that there were secrets involved that he could get that might unlock some doors for him. Bira's answer was substantially the same. He told the young man to learn to drive faster.

In racing one learns quickly that the really clean car is usually the one that is best prepared. Regardless of how many tuning specialists tell you that there is much to be gained by replacing the factory cam and replacing this or that, be wary of such advice. It is true that for specialized work you can get improvements, but it's almost always by sacrificing important performance in another range. Most factories are expert organizations who know a great deal more about motor cars in general and their own beastie in particular than "Joe's engine swapping emporium" down on the corner. It is a really important rule to stick by the book, at least when you are beginning. Some important sports car manufacturers actually have special super tuning manuals to guide you in advanced modification work. Most will answer your questions about such problems and give advice, and as a rule if they veto the idea—forget it, because they do know better.

As for learning to drive your new sports car, there are a series of simple things to remember. Your seating position is critical, and should receive first attention. A great many people miss on this one, and good driving begins here. You must be comfortable. Sit well back. As far back from the wheel as you can and reach the wheel easily. If you have short legs and trouble reaching the pedals, fit extensions to the pedals so you can keep the correct seating position. There are a couple of vital benefits that accrue from this so-called continental style. In all but sharp, slow corners you can manage with upper arm and shoulder pressure and a bare wrist movement which will save a lot of effort. This is always important. If you decide to take a whack at the "Twelve Hours of Sebring" and spend six to eight hours in the saddle it's a must. Also in driving in the arm extended position you eliminate the arm twisting which results from sitting up close, or the reverse—that is pulling the wheel up to you. It is fairly easy to cross up this way, and this can not only be embarrassing, but sometimes quite painful.

If you are going to drive for fun—over forty miles an hour, use a seat belt if you possibly can. If you go to any trials or speed events of any kind, invest in a

quality crash hat. Don't ever drive without an adequate windscreen. Many drivers fold their windscreens and tool around with sun glasses on. This is a fine way to lose an eye and your life should a truck throw a stone back at you.

Although many cars can be driven comfortably with eighteen pounds of tire pressure, don't try and corner fast with less than 24 pounds. If you are serious, 25-26 in front and 27-29 in the rear will be more like the right ticket.

The heart of good sports car motoring is your finesse with the gear box, brakes and throttle. In general the smoothest driver is the fastest man on any circuit. He will usually be the steadiest too. These are quick keys to who has it and who hasn't. Don't lean around the cockpit in exaggerated poses. In general, with the exception of the slow sharp corners where you use your shoulders to swing the car around, try to keep from leaning back and forth.

You should make up little tricks for driving exercises. One good one is to see if you can drive short distances without varying engine speed. Pick a moderate 'Tach' setting like 3000 rpm in a small sports car and 2000 or 2500 in a bigger one, and change gears constantly without allowing your engine speed to change. This will give you throttle-gear box synchronization as quickly as any exercise. The reverse is also excellent but slightly harder. (Don't try it around town though.) That is—Pick a speed of say thirty or so and use the top three gears without jerking the car around. You'll be surprised to see how fast you and the gear box become friendly.

As a rule sports cars have pretty fine brakes, particularly for touring purposes. If you drive with good sense and manners you will rarely have to make a 'crash' stop. Mostly you will use your anchors for slowing and steadying the car in over the road travel. There are a host of subtleties that the master can weave into his use of brakes with regard to this 'steadying' business we refer to. Try to learn to be smooth with your brakes. Firm but smooth applications are what you want. Never lock 'em up solid, for the minute your wheels start sliding, you are working against yourself. You are not stopping as fast as possible, and worse—you can lose control of your car. This is especially true of bad weather conditions. Use your gearbox to assist your brakes except in special cases like Alpine trials or racing events where you fear for the life of the transmission and the anchors are on the expendable list.

Work hard at not overdriving, it's important. When you think you're ready for competition, start watching, you learn more that way than by actual driving. Watching a race with an eye cocked for your own benefit can be an absorbing and fascinating thing. Next month we will outline some of the things to look for.

By the way, don't forget to check your oil.



the **GLEN** people

WATKINS GLEN: An SCI Pictorial Report



Midnight at the Cunningham-Momo garage. Bleary-eyed onlookers watch tuning techniques carefully as reporter dozes.

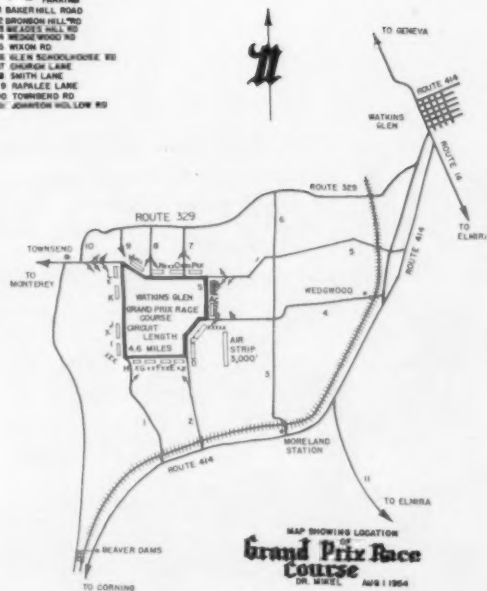


Towers constructed for the photographers were taken over as vantage points by spectators.



WATKINS GLEN has become a classic in its own right. The 125,000 who attended this eighth annual running saw five events held on the track, but the major attraction of Watkins Glen takes place during the late hours on the nights preceding the race. The Watkins Glen event is in this sense a carnival during which a small town swells to near bursting. Stores which are closed at 9 p.m. during most of the year are open all night, streets which are usually deserted shortly after sunset are now crowded with enthusiasts, casuals, and hangers on eagerly watching a mechanic's progress on a reticent engine. They'll stay until the last car has been prepared and the

BLEACHERS
 1. SPECTATORS
 2. BAKER HILL ROAD
 3. BIRCHWOOD HILL RD
 4. BEARDS HILL RD
 5. WILSON RD
 6. GLEN BIRCHWOOD RD
 7. GOURN LANE
 8. SMITH LANE
 9. DANIELS LANE
 10. TOWNSEND RD
 11. JOHNSON HOLLOW RD



Snow fences make
 good foot rests
 sleeping bags,
 good pillows.

Enthusiasts spent most of night peering
 into garages watching the preparations
 of cars.

"Wacky" Arnolt sports the
 ultimate in headwear as
 Briggs Cunningham critically
 watches Sherwood Johnson's
 performance in the D Jag.





Al Winteringham left no doubt as to his interest in the sports car field in general and his publication, Badge Bar Journal, in particular.

Beach umbrellas and full picnic equipment was brought by many entrants along with full course meals.



last drop of Bourbon consumed.

Since the racing course has been transferred out of the town's limits, injuries have diminished. Spectators barely see the flashing of a car as it speeds by. It's a fine course for the drivers but pretty dull fare for the spectators.

Crowd control was excellent. The citizens of Watkins Hamlet who found themselves suddenly pressed into service as police, followed orders to the letter. They wouldn't even let drivers on the track. Photographers and members of the working press were often prevented from entering positions to get proper coverage, and spent the entire race waiting helplessly and hopelessly behind snow fences. The Watkins Glen road race will, as the years go by, become a mecca for American racing, for it provides the crossed flavor of the hurley-burley along with the excitement of competition. ●

Littered paddock and a lone MG in the aftermath of the Watkins Glen Grand Prix.



(Continued from page 27)

lost. In order to prevent this occurrence, we enclose speakers in wooden cabinets (sometimes brick) lined with acoustical insulation. This effectively prevents, or baffles, the sound waves from the back of the cone, not allowing them to interfere with those emanating from the front.

Can we hope to achieve high fidelity sound within the cramped confines of an automobile? Again, the answer is yes. We can't hope to realize the same quality of reproduction that a huge speaker installation magnificently provides. But we can get most of the sound in most of the music we'll ever listen to, and it will definitely be high fidelity sound. Here is how to do it:

In selecting an FM tuner for our automobile high fidelity sound system, we can adapt, if possible, FM home system tuners now on the market, providing that we can supply the needed power. In most cases, the ordinary auto battery will not be able to carry the rather large load of current required. Special power packs and converters are available which can turn the trick. Power, however, is not the only obstacle. Unfortunately, many, many others also exist.

Basically, we simply do not have the space for FM tuner, plus power supply, plus power amplifier, plus speaker system in our cars if we are to make use of the usual type of high fidelity components. On top of that, cost would be rather high. And, most fatal of all, standard high fidelity tuners are not built ruggedly enough to withstand the shocks and bumps to which they would be subject. In addition, because of the proximity of the tuner, if placed in its usual position in the dashboard, to the electrical generating system of the car, we could expect very little undistorted sound. Stray electrical fields of interference from the generator and motor would mask whatever stations came in with random noise and "interference hash" of all types. Radios made for use in automobiles, for this very reason, are very carefully shielded and designed.

The better approach is to select an FM tuner specifically designed for automobile use. Fortunately, such a choice is now possible. An FM tuner, for use in automobiles, with separate models for 6 or 12 volt car batteries, and with other models for use with the power supply, sound amplification system and speaker of an already installed AM radio, is now being marketed. The name of the tuner is the Hastings High Fidelity FM car receiver.

This tuner nicely meets the requirements for high fidelity sound reception which we have previously outlined. It will reproduce the entire audio range with little distortion, will withstand the shocks and vibration of automobile service and meets all our requirements for compactness.

If an AM radio is already installed, the tuner can be connected by your serviceman to make use of the AM radio's audio amplifier section, power supply and speaker. On the other hand, if no auto radio has been installed, the Hastings tuner can be purchased along with separate power amplifier from the same company. The power amplifier specifications show that the unit will provide full audio range reproduction at a power level of 8 watts, with a distortion of only 2%. Since we will use normally no more than 1 or 2 watts, distortion will be less than 1%.

Also supplied by the firm is an unusual FM antenna.

Having reached our goal of high fidelity components in the form of FM tuner and power amplifier, we come now to the last link in the chain, the high fidelity speaker system.

Can we use the speaker in our already installed AM radio? We can, but we definitely do not want to. Its sound qualities will simply not come up to our high fidelity standards.

Ordinary auto radios use speakers which are suitable for restricted AM reception, but will not take full advantage of the extended range of sound of which FM is capable. If we want to reproduce the audio spectrum from 50 to 70 cycles at the bottom, to 15,000 cycles at the top, we need speakers especially designed for this range. Some individual speakers can do it. Another approach is to use two speakers: a larger one for the low sounds (it's called a woofer) and a small one for the high sounds (known as a tweeter). Since we are faced with a space problem, we'll use an 8-inch woofer and small tweeter mounted in a compact cabinet. Such combinations are now available in profusion. Some cone speakers of very good quality which can also handle the full audio range are also available and may be used. Your own listening tests will tell you which you prefer. Whether we use a woofer and tweeter, or single cone speaker, we'll have to get them in a proper enclosure for distortionless sound.

Typical speakers and enclosures which may be used are: the Kingdom-Lorenz speaker system, which contains an 8-inch woofer and separate tweeter and comes in a cabinet 12 inches x 16 inches x 19 inches; the Stan White, Inc., LePetitte, a highly efficient woofer-tweeter combination in an enclosure only 19 inches x 12 inches x 9 inches; and the G & H Rebel V corner enclosure, in which we may install single cone high fidelity speakers made by University, Lansing, Bozak, Electro-Voice, Altec-Lansing, etc., all of which are commonly available from sound jobbers throughout the country.

Make sure that the speaker's rated impedance is 8 ohms, since the Hastings power amplifier is matched to 8 ohm speakers. Most high fidelity speakers are available in 8 ohm impedance ratings. A 4 ohm speaker can be used, but its power will drop because of the mis-match.

The speaker system will fit nicely into the corner against the firewall opposite the driver. It should be placed so that the speaker beams to the right of the driver and to the left of the passenger in the front seat.

In listening to speaker systems in high fidelity music stores, keep in mind that some speakers may seem very impressive at first hearing, but will seem harsh and "peaky" at subsequent listening sessions. Look for such things as smooth, natural reproduction, with a minimum of artificial sounding peaks or "high notes." When fully satisfied, consult your service technician and make sure that installation and matching of components present no problem in your car. Then make your purchases.

More and more components are placed on the high fidelity market each year. Undoubtedly, other manufacturers will be making FM tuners and power amplifiers for use in automobiles in the very near future. Measure their performance by the objective criteria outlined in this article in order to assess their worth. And keep in mind always that you and your ear, for yourself, are the only legitimate judges of good sound.

Nightmare Grand Prix

(Continued from page 23)

We rounded the turn and—bright in the headlamp ray—came a sudden horrible vision of overturned cars right across the road. Again there was no time to think, nor to feel afraid. At high speed, independent of me, instinct said "you must hit sideways, not end on." I pulled hard on the hand brake which operated only on the rear wheels. With a nasty screeching slide the car crashed into the mess. So high piled were the wrecks that I foolishly put up an arm to fend off part of one that seemed likely to fall on me. With an almighty bump we struck and there was sudden silence. Still unable to think clearly I got out.

A car lay on the left, its nose buried in the barrier, its tail at right angles to the course. From the far verge projected the wreck of another lying on its side. Sickeningly perched right up on that car was a third with its front axle driven right back into the engine sump.

For a moment the road seemed to be blocked. Then I saw that there was just space to get through between the two piles of cars. Came suddenly the shocking realization that two of these cars were ours. For perhaps a second I searched the wreckage calling for George. George answered from the darkness of the bank that he was O.K. but that someone was dead underneath. I could find no one.

At all costs my car must be made to go on. The other two were wrecked and if I did not get away immediately I should be rammed by the cars to come. Rapid inspection showed trouble at the front of the car, a wheel twisted, a pulped headlamp. But I got the engine started and very gingerly tried to move. The car answered. By maneuvering forwards then back I got through the gap. We went off slowly in the darkness to the pit. I thought "This is the end. I shall never be allowed to drive again if this darned car can't be got to the finish."

Meantime, Drama at the pits.

The minutes passed and not a single car came along. Nor was there sound of any. All talk ceased while people stared down the course. It seemed incredible but still no car came. And then into the brightly lit area of the pits and grandstands came, slowly, a car without lights, its front looking a wreck. A buzz of excited chatter arose.

When I pulled up at the pit I tried to convince the officials that there had been an almighty crash at White House and that the road was blocked. No one would believe it. All the news I could give of the four and a half litre, and the other three litres was received with a stunned silence.

Suddenly the thing hit home and everything happened at once. I worked feverishly, changing a wheel, bending things straight, trying to revive the lights, evaluating the damage. I had to do it alone since the rules forbade assistance in any form. Also, I had to keep the team chief from knowing too much lest he forbade the car to continue.

Things might have been worse, as it happened. The frame was bent, the axle back on one side, the fenders and running board twisted, and one lamp past praying for; but it looked as though the machine might be drivable. At the end of quite a time I went off urgently instructed to take it easy, with a flashlight in place of the headlamp. It was not a pleasant lap. The engine was O.K. but the steering erratic and the brakes went on 1, 4, 3, 2 instead of all together, which made life exciting at the turns. I admit to being nervous, particularly about the steering drop arm and its ball joint, which must have had a hell of a clout. But after three laps things seemed a little better and after four I had the hang of things sufficiently to increase speed praying hard and with fervour.

As nothing too bad happened it was possible to give a thumbs up signal when passing the pit, greatly to everyone's encouragement. But for a time the White House turn was grim. Gangs were working feverishly to drag the wrecks to one side, their number apparently increased since I got through, and the turn speed was reduced to a crawl. Not that I minded crawling, given watertight excuse. But the road was cleared in time and the fun commenced again.

Bits fell off the car causing stops to put them on (one bit being the battery). We went a little faster every lap. In due course I came in to refill and handed over to Benjy. Now it is one thing to drive a car with which one has crashed, quite another to take over that car from its original driver. Benjy never turned a hair and, which was better still, he kept the speed up.

And then, for several wonderful rounds, I saw the tail of the principal rival ahead, found that we were gaining, and actually succeeded in overtaking, which was fine. Promptly we had the battle of a lifetime and at long last the other car's engine burst just as the chief thought it would. We had won. A thing so incredible that neither Benjy or I have ever forgotten it.

One small point. The car should have crossed the line victoriously with Benjy at the wheel, it being his turn. Four laps or so from the end he pulled in and insisted I drive whether I wanted to or not—because I had been driving when the crash happened and, he swore, the old car insisted on it. Never before in the long history of racing had a driver been so nervous as I was during those last laps when it needed one slight error and the success which was within sight would turn into failure. All this could happen to any driver any time; that is the joy of racing.

But mark-left to ourselves we should NOT have won that race, being mighty glad to finish. Only the control in the pit knew the situation and gave the orders which resulted in victory.

—☆—

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(Continued from page 25)

MG A SPORTS CAR SPECIFICATIONS

ENGINE: Four cylinders; bore 73.025 mm. (2.875 in.), stroke 89 mm. (3.5 in.), capacity 1489 c.c. (90.88 cu.in.); o.h.v. push-rod-operated; three-bearing counterbalanced crankshaft; compression ratio 8.3 to 1; b.h.p. 68 h.p. at 5,500; cooling by water pump and fan with thermostatic control; forced-feed engine lubrication by eccentric rotor pump; external renewable element full-flow oil filter; oil capacity 8½ pints; filler on valve cover; aluminum alloy pistons with one oil control and three compression rings; 14mm. spark plugs; and pressed steel sump.

FUEL SYSTEM: Twin S.U. semi-downdraught carburetors with individual air cleaners; rear-mounted S.U. electric high-duty fuel pump; tank capacity 12½ gallons; fuel gauge on dash.

ELECTRICAL EQUIPMENT: Ignition by 12-volt oil-filled coil and fully automatic distributor with vacuum and centrifugal advance control; suppressor equipment; belt-driven dynamo; compensated voltage control; single-pole positive ground wiring system; dash-controlled started switch; twin-blade self-parking windshield wipers; twin stop-tail lamps with flashing direction indicators and rear reflector equipment; double dipping sealed beam headlamps; foot-operated dimming switch; separate sidelamps; twin Lucas batteries mounted in balance positions behind seats.

CHASSIS: Exceptionally sturdy box-section frame, specially braced for torsional rigidity; rear end of chassis swept over rear axle.

TRANSMISSION: Hydraulically operated single dry plate Borg and Beck clutch; 8 in. diameter; four speeds and reverse; synchromesh on second, third and fourth. Overall gear ratios: first 15.652, second 9.520, third 5.908, top 4.3, reverse 20.468. Central remote-control gear change. Tubular propeller shaft with needle-bearing universal joints.

AXLE: Three-quarter-floating rear axle with hypoid final reduction gears; ratio 4.3 to 1; semi-elliptic rear springs controlled by hydraulic dampers. Independent front suspension by coil springs and wishbone-type links controlled by hydraulic dampers.

STEERING: Direct rack-and-pinion steering with large-diameter spring-spoke, clear-view steering wheel.

BRAKES: Lockheed hydraulic fully compensated on all four wheels; 10 in. diameter brake-drums; central hand-brake lever with press-button "fly off" ratchet control.

TIRES AND WHEELS: Dunlop 5.60-15 tires on 4.00 x 15 well base, disc-type wheels with four-stud fixing.

INSTRUMENTS: Large speedometer with headlamp high-beam warning lamp; large revolution indicator with ignition warning light; oil pressure gauge; water temperature gauge; fuel indicator gauge; ignition switch; rheostat panel light switch; mixture control; map-reading light, direction indicator switch and warning light; lighting switch.

BODY DETAILS: Open two-seater streamlined body with enclosed luggage compartment; independently adjustable bucket-type seats with foam rubber cushions and backs covered in leather; door pockets; one-piece, curved safety glass windshield; folding, waterproof top with large rear transparent panel; two detachable side-screens with combined stowage and top cover; driving mirror centrally mounted; spare wheel, tools, jack and starting handle housed in rear compartment; quick-release gas filler cap; remote-control locks for hood and luggage compartment lid; one-piece hood hinged at rear, giving easy access to engine unit.

OPTIONAL EXTRAS

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White wall tires.
5.90 x 15 competition tires.
Adjustable telescopic steering column.
Center lock wire wheels.
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DIMENSIONS

Wheel base—94"
Front track—Disc wheels 47½"—Wire wheels 47⅞"
Rear track—Disc wheels 48¾"—Wire wheels 48¾"
Overall length—156"
Overall width—58"
Overall height (including top)—50"
Ground clearance—6"
Weight—1900 lbs.

Performance

0-40.....	6.2 seconds
0-60.....	13.8 seconds
0-80.....	25.8 seconds
Top Speed.....	106 mph (4.3 back axle)
Top Speeds gear (6000 rpm)	
Max. Torque.....	4500 rpm
1st.....	28 mph.
2nd.....	49 mph.
3rd.....	78 mph.
4th.....	106 mph.

Volkswagen

(Continued from page 15)

managership of the factory to Heinz Nordhoff, a former Opel truck factory director, who reluctantly accepted. Putting into effect the production line techniques he remembered from his General Motors training, Nordhoff speeded up production and began making improvements in the Volkswagen.

By 1946, production had climbed to 9,878, then declined slightly to 8,973 in 1947. Two years later, with exports flowing to many countries around the world, Nordhoff was directing a factory employing more than 10,000 workers and producing 46,500 cars a year.

Compared to the Volkswagen picture today, that was only a start. In August of this year, the one millionth post-war VW rolled off the production line. Production is now 250,000 to 300,000 cars a year, half of which is exported to 100 different countries. And today, while the dispute continues over the owner-

ship of Volkswagen Werk, it stands as the world's fourth largest automobile manufacturer.

The acceptance of the VW in the U.S. is no less outstanding. From a scant few imports in the early 1950's, VW sales in America climbed last year to 6,344—more than twice as many as the next foreign car.

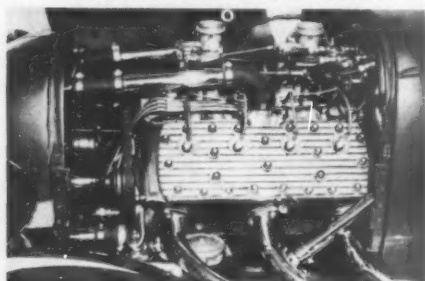
This year, Nordhoff expects to sell 35,000 VW's in the U.S. and announced only recently the purchase of an assembly plant in New Brunswick, N. J., which should begin turning out cars sometime next year.

On January 30, 1951, the man who started the Volkswagen story died in Stuttgart. Fortunately he lived long enough to see both his Volkswagen and its rich uncle, the Porsche, gain wide acceptance. It was his genius and his determination to experiment with the unconventional that led to the Volkswagen — a car that today is literally beyond expectation.



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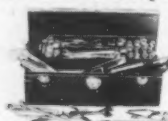
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VW auto club

ORGANIZED early this year, the VW Auto Club of U.S. has more than 150 members and is now chartering local and regional clubs throughout the country. Its members are located in almost every state, in Canada and in foreign countries around the world, including many servicemen in U.S. Armed Forces overseas.

The club, which is not connected in any way with the Volkswagen factory, U.S. importers, distributors or dealers, offers 12-month membership for \$10. This includes a subscription to the official club publication, **THE VW AUTOIST**, and the club badge.

The club is intended to help the Volkswagen owner get the fullest pleasure, usefulness and economy from his car. To accomplish this, every issue of **THE VW AUTOIST** concentrates on hints, tips, general and technical information concerning the Volkswagen. A typical issue, for instance, carries a major do-it-yourself project (like undercoating a Volkswagen), tips on maintenance and service, lists of accessories available for the VW, reports on the VW in competition, and miscellaneous other items.

In addition, club members can take advantage of several other services. Special offers, such as discounts on automotive books and similar items, are available to members only. Members with mechanical problems can write the club and get advice and assistance from trained mechanics on the club's board of directors. Also provided to members is a technical data sheet to be posted in the window of the member's Volkswagen—to save him time answering the hundreds of questions curious onlookers ask every VW owner.

In the planning stage at the present time, in addition to the formation of local or regional clubs under a charter from the national club, is a national meeting of the club. Details on this meeting and other club activities will be announced soon.

Officers of the club are Webber H. Glidden, Leonia, N. J., president; Richard Carlson, Paramus, N. J., vice-president; William T. Haupt, Teaneck, N. J., secretary; Edmund Nelle, Jr., Edgewater, N. J., treasurer; Fred Scheele, Ridgefield, N. J., assistant secretary; Sterling Parks, Jr., New York City, assistant treasurer; and Alvin W. Outcalt, Nutley, N. J., public relations director and editor of **THE VW AUTOIST**.

Membership in the VW Auto Club of U.S. is open to any VW owner or enthusiast. Anyone interested should write to Box 13, Fordham Station, New York 58, New York. Charter membership is still open but will be closed shortly.

with the clubs

THE Long Island Sports Car Association, LISCA to most, has been going great guns with its Rally School. Under the tutelage of Joe Bracco, the sessions have been playing to SRO participating audiences, overflowing into the halls and onto the porch of the *sine qua non* Bella Vista, Northern Blvd., Centerport. John Buzzetta and Gene Semprini, mine hosts of the auto, deserve another pat on the back for making space available.

Several of the monthly meetings have come and gone, more being scheduled with the added attraction of on-the-road supervision of the boys applying the principles learned in class room.

A neat package of local events comes to us from the Kansas City Region SCCA. A pre-race rally (before the St. Joseph to-do) from K.C. to St. Joe (Memphis not on the route) brought in sixteen teams with less than 17 points knocked off. The winner, ain't it the way, was a non-member, M. Schook, driving a T-Bird to home base with a perfect score. A concours d'elegance was thrown in for fine measure. Ah, the race. Chuck Hassom, Cincinnati, Ohio, took the over-all trophy in his 4.9 Ferrari, averaging 99.6 miles per hour for 81.25 miles.

From the K.C. Region, again, we got some dope on the clubs mentioned below. Some of the information, which we think may interest a good number of readers, was new to us.

Porsche Club of America, c/o William J. Sholar, 1542 Mt. Eagle Place, Alexandria, Virginia.

Group acts as clearing house for information that might interest Porsche owners. It will issue monthly Porsche bulletin containing and clarifying technical information, and a list of Porsche owners, general news, activities, etc.

Jaguar Owners Association (JAG), c/o George Evidokimov, Pres., 137 East 28 Street, New York 16, New York.

This group issues monthly journal containing service tips and general info for Jag owners; runs national rallies.

The Sports Car Club of America (SCCA) National Newsletter brings us the following potpourri of information which we will pass on to the general public. Contest Board rules call for special racing type tires on cars capable of speeds in excess of 115 mph. The Newsletter mentions Dunlop Road Speed tires as an example of an acceptable brand. (Does sports car usage allow for the use of the word "marque" applied to tires?)

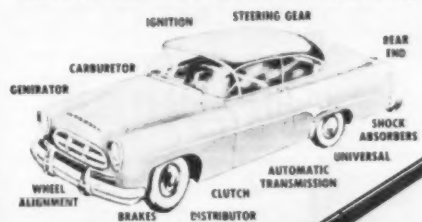
A change in rules allows "Baldies" (Macadam or asphalt slick types) to be used on Unrestricted Category cars only; recaps are still outlawed in all categories. Also; drivers of all cars in races, climbs, trials, and the practice there-for, must wear goggles or visors. When in a closed car, or one with fully erected, regular windscreen, the driver may substitute glasses.

And an additional tid-bit: those contemplating competition may now purchase on-the-scene insurance from Baur & Baur through the Club's Insurance Agency. Officials interested may contact Mr. Harry Boyle, Baur & Baur, Suite A 1831, 175 W. Jackson Blvd., Chicago 4, Illinois.

—And that's the way the chicane twists this month. . .

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LASALLE Extension University, 417 So. Dearborn St.
A Correspondence Institution Dept. H-113 Chicago 5, Ill.

Shoppers' Showcase

MOTION MAPS: "Trip Finder," a brand new idea in motoring maps replaces the cumbersome "blanket-type" maps that spread all over the front seat of the automobile. With the Motion Map, you are given full details on main motor routes, plus mileage to and from principal cities in an instant. A simple movement of the slide-rule insert gives mile-



age distances between cities immediately. Each Trip Finder Map covers a section of the United States. The series of 16 Maps gives motor information for every state in the Union. They are easy to read, handy to carry and full color printed on both sides. They may be purchased individually, or in a set of 16 Maps covering the entire country. Sayles-Wilson, Inc., 527 W. 39th St., Kansas City, Missouri

TUBELESS TIRE REPAIR KIT: The all-purpose Tyre-X Tubeless Tire Repair Kit introduces a new and revolutionary method of repairing tubeless tires. The kit enables car owners to make instant and permanent repairs to punctures in tubeless tires up to 1/8 inch from the outside, without having to jack up the



car or remove the wheel or tire. The Tyre-X method includes the all-important step of reinflating the tire to normal air pressure on the spot. The kit is a family handyman—will repair leaks in bicycle tires, hot water bottles, air mattresses and innumerable other rubber products. Tyre Sales Corporation, 71-09 Austin St., Forest Hills, N. Y. \$3.39

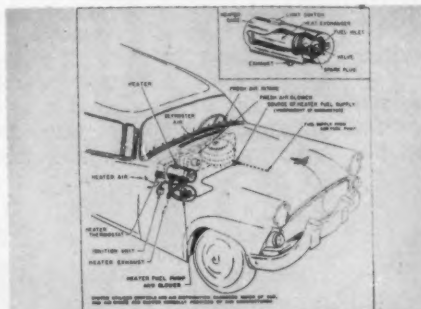
PICK-UP TOOL: One of the handiest tools ever devised, this gadget has uses in the home as well as in fac-

tories. Service men can use it on all kind of equipment, too. By pressing the button on the top of its 14 inch length,



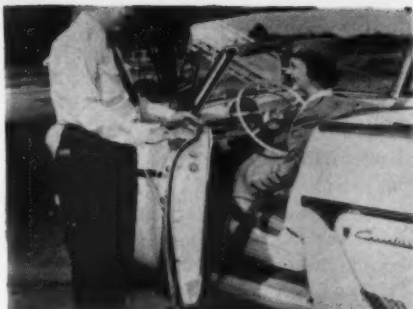
claws are opened which engage small articles that may be dropped in awkward places. It also may be used for holding a nut and would serve as a screw starter. L. B. Miller Co., 394-6 State St., Stamford, Conn.

HEATING SYSTEM: A new automobile heating system has been announced by the South Wind Division of Stewart-Warner Corp. The new system is completely independent of the car's engine or coolant, delivers fresh, heated air from outside almost instantly after it is turned on, and is completely automatic



in maintaining a pre-selected temperature in the car without attention from the driver regardless of speed or outside temperatures. Because it is completely independent from the engine, the system permits both maximum engine fuel economy and maximum engine service interval. Stewart-Warner Corp., 1826 Diversey Pkwy, Chicago 14, Ill.

SAFETY BELTS: Sparton Karbelts anchor the outer half of each belt set to the car door. Not only do Karbelts keep the driver and passengers from being thrown violently forward in an accident or sudden stop—they keep the car's doors closed in a crash. By thus helping to maintain the maximum structural strength of the automobile, Karbelts



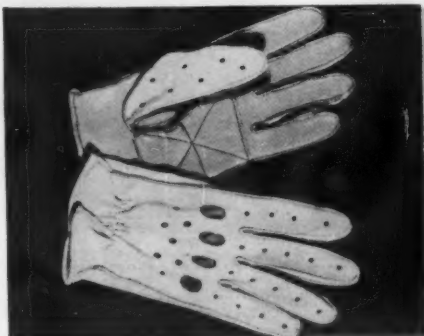
offer a new margin of safety. Sparten Automotive Division, Sparks-Withington Co., Jackson, Mich.

TRACTION TREADS: When you're stuck on ice, in snow, mud or sand here's a flexible steel mesh pathway to freedom. It's called Magicarpet, of all things. By placing one tread each in



front of rear wheels if moving forward, or behind if moving in reverse, the weight of your car presses down and gives tires positive traction. Onell Enterprises, Inc. 20 East Jackson Blvd., Chicago 4, Ill. \$1.79 per set.

Grand Prix driving gloves, as worn by sports car drivers and famous racers, formerly available only on special order, are now being imported in quantity. Hand-made in Italy from top quality sheepskin, they are reinforced at key wear points for long life. Double thickness palm and welted thumb inset give greater hand protection but still allow



actual feel of the steering wheel. Backs are ventilated for comfort and gathered for snug fit at wrist. Soft, supple, comfortable and durable, these gloves are an ideal gift for the sports-minded man or woman. Sizes: for Ladies: 6½ to 7½; for Men: 7½ to 10... brown palm, tan

back.

MG Mitten Co., Dept. SC, P.O. Box 110, South San Gabriel, California. \$7.95 per pair ppd.; add 3% Sales Tax in Cal.

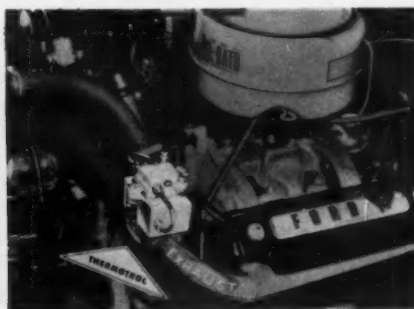
A new ½ in. drive electric impact wrench incorporating a "finger tip reverse" in the handle, named the Thor SpeedWrench No. 55, has been announced. The new reverse feature is claimed to eliminate armature brush shifting, to permit more rigid armature support to develop extra power and longer life and, further, to permit solid



rear-end construction where impact wrenches receive most abuse. The wrench is rated for a standard capacity of ¾ in. bolt size nut setting, with an extra capacity of ½ in. It is designed for use with standard ½ in. square drive wrench sockets and may be adapted for driving square end taps, round shank drills, reamers, wire brushes and other accessories.

SpeedWay Division, Thor Power Tool Co., Aurora, Illinois.

The Hoskinson Thermotrol, a heat exchanger which increases engine life by regulating the oil temperature, has been redesigned into a one-piece unit. The item is said to have eliminated hydraulic valve lifter trouble caused by cold oil, and valve noise is reduced to a minimum in valve-in-head engines. The



Thermotrol is connected to the oil header line and clamped to the exhaust pipe. The increase of filter cartridge life alone, it is claimed, more than pays for the installation. On the road, start-and-stop efficiency is accomplished by bringing oil up to operating temperature almost immediately. The Thermotrol uses the exhaust heat to raise the temperature.

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Continental Thermotrol Inc., Falmouth and Denton Aves., New Hyde Park, N.Y.

Cam-Loc is a one-piece, open end Roller Ratchet wrench designed for faster, more efficient operation in hard-to-get-at places. A particular use is for such work as attaching oil filters—work on oil, gas and brake lines. Cam-Loc will fit over badly burred or heavily painted (undercoated) nuts. This is due to the spring expansion allowed behind the



steel rollers which are imported from Switzerland. This wrench will not mar chrome fittings and its roller principle offers tighter grip and equalized torque. Available in nine sizes—¾ in. to 1 in., inclusive. Available through local outlets.

TKF Company, Fisher Building, Detroit 2, Michigan.

Krylon Crystal Clear plastic spray is reputed to halt the dissipation of voltage in idle batteries. The method, as employed by an automotive electrical firm, begins with the cleaning of the battery with a solution of baking soda. Then the battery is sprayed with Krylon Clear acrylic. This coats the top of the battery, preventing the vaporizing of hydrogen,

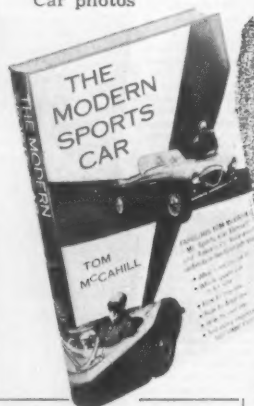


which is always present, from condensing and impregnating itself with dust and grime. The voltage loss is due to the top surfaces getting grimy and forming a metallic-like coating on the hard rubber surface. This contact uses up about one-third volt, it is said. The method mentioned here has been used with success by several large trucking firms.

Krylon is available locally—any art supply store.

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Dyna-Panhard

(Continued from page 21)

So far so good. But how could the weight problem be so reconciled to a body large enough to carry six adults?

The solution lay in the extensive employment of aluminum alloys, which are used for chassis, body, power unit and transmission components.

P. and L. rejected the combined body and chassis made from castings, and designed instead their own steel platform chassis and suspension system, planned their tiny but high-efficiency engine to work through the front wheels, and used a novel aluminum framework covered with aluminum alloy panels for the body.

There are no castings in the frame of the new car. Body and chassis are made from light alloy pressings joined by electrical spot welding.

The car as a whole consists of three units:

The front unit (front wheel drive) comprising of the engine, clutch, transmission, steering mechanism, suspension, wheels, all auxiliary parts and the supporting cross-member and front-drive axle; the whole assembly being joined to the central platform by six bolts.

The rear unit, including the suspension, brakes, wheels and accessory parts, is joined to the central platform by only five bolts!

The sub-structure or central platform with the body on top of it unites all structural parts.

The body, as finally approved, can be completely equipped, fitted and painted, before mounting. All production line assembly is done from the outside with all doors closed. Connections for the electrical circuit and instrument panel are provided by special multiple pin-plugs.

Another feature is that, in case of either a slight or serious accident, the removal of one of the mechanical assemblies is simple and fast. Repairs can be made without useless dis-assembling and re-assembling of parts or the surrounding bodywork nor need the interior of the car suffer the inevitably damage which usually accompanies such matters.

The concentration of strength in the floor makes it possible to have less material in the upper part and therefore, to lower the centre of gravity. This feature, allied to the low positioning of the seats, reduces the effects of centrifugal force on curves and greatly aids good road-holding.

Mechanically the Dyna is no less interesting.

The engine is an overhead valve four stroke air-cooled flat twin unit with 75 mm bore, 85 mm stroke and 850 c.c. displacement.

The Dyna's brake hp. (with 7.28:1 compression ratio) is 42 bhp. at 5,000 rpm. with a formula reading of 0.81 hp. per displaced cubic inch, a ratio never achieved before on a stock car. Hemispherical combustion chambers and special removable cast iron cylinder sleeves are interesting features of the engine. The valves are made of high resistance austenitic steel with nitroded stems and are driven by a concentric torque rod and tube drive to ensure positive control at the highest speeds. To avoid improper distribution due to abnormal play when the engine is hot, the push rods driving the rocker arms are made of aluminum alloy rods that have the same co-efficient of expansion as the cylinder block. Connecting-rod bearings are special Panhard wear-resistant, non-slip roller bearings, with roller-type spacers. The clutch is of the single disc dry type.

The transmission consists of four synchronized silent,

special profile gears, which have undergone "shaving" and selected heat treatments. In third gear the car can reach 62 mph. and the fourth (overdrive) gear maintains a high speed on a level road without straining the engine and helps to achieve the extraordinary low fuel consumption. The gear change is on the steering column. The resemblance of gear ratios to the Volkswagen design is noticed. In fact, the design throughout reflects a similar disrespect for old ideas!

The suspension at front is independent and consists of two leaf-type springs and Houdaille shock absorbers. The hydraulic brakes have large lining areas (these French boys must never forget that the Alps sit astride their back door step) and, as a touch of originality, the mechanical handbrake works on the front wheels.

The rack and pinion, wide angle steering gear enables the 15 ft. 3 in. car to turn in a 20 ft. street. And if this isn't an eleven foot smaller turning circle than required by any U.S. auto product, then we'll eat our hats!

The front unit assembly, complete with engine and battery weighs only 573 lbs.

The rear suspension is comprised of a beam axle controlled by torsion bars.

All controls and instruments are pre-assembled on the steering bracket mounted on the dash board. The whole dash board, complete with speedometer, ammeter, oil pressure and fuel level gauge is mounted externally with a single multiple-plug connection.

Almost all the wiring is located on the outside of the car, so that it is not in contact with combustible materials. The wire feeding the two interior lights is the only exception, and it passes through the door posts.

The conclusion reached at the end of this study is that the new Dyna is an "intelligent" or functional car, designed with no regard to current practices and fashions but in accordance with basic physical realities. It will, we believe, open up a new era in car construction and it seems a pity that so far, hardly a single Dyna has been imported into the U.S.

It is not surprising in view of the Panhard's price—over \$2,000 in France—though it would be a brave man who would say that ere long this figure will not be got down to a more tempting level. Especially now that Panhard and Citroen have teamed up on a manufacturing agreement.

When this develops we may see plenty of Dynas.

One last touch of the unorthodox. The Dyna's interior heater ignores the possibilities of using the air after it has cooled the engine and depends instead on a catalytic petrol burner. The catalyst keeps the actual flame temperature within safe limits. The car would nearly be worth buying just to find out how this piece of contradictory theory works out!

In International competitions the name Dyna Panhard is already legend. The Dyna 55 was second in the general classification in this year's Monte Carlo Rally (even Jags and Mercs couldn't look at it) and was first in its class in the long Sebring 12 hours' trial. Apart from these recent results the marque has consistently won its class at Le Mans and in the Mille Miglie, and in 1954 a specially bodied job actually won the Ulster Tourist Trophy race (on handicap) from such big guns as Ferraris, MG's Lancias and D-type Jaguars.

—☆—

the Editors' Page

A SCARI, Levegh, and Vukovich are gone. Their passing marked the worst year racing has ever seen. The bloodletting at LeMans was a signal that aroused public indignation throughout two continents, rallied congressional opposition, and shook Mercedes and Ferrari right out of the Grand Prix circuits. Here, in a situation of cause and effect, the effect is crystal clear, the cause is clouded in obscurity and recriminations.

Men who drive sports cars belong to a universal fraternity; they are the bullfighters, mountain climbers, hunters and all those whose spice of life lies in the risks taken in everyday living. If they weren't driving tortuous roads, they would probably be tight rope walkers. This is a basic characteristic of man—a characteristic that reveals itself full grown in the racing driver, and sparks up in all of us every time we race across a street on the pretext of being in a hurry. It's the reason multitudes turn out at every race, living the entire spectacle with the drivers, and sometimes hoping for the disaster that will satisfy their own lust for the emotional crisis.

This is healthy. It's the basis of all spectator sports, but when the risks are high the men must be separated from the boys; amateurs must be weeded out, and hardened pros brought in to administer to the safety of both the participants and crowds. The participants are taking a calculated risk, but the crowd is the innocent bystander that must be protected from himself as well as the cars.

Racing is at about the same point as boxing was at the turn of the century, a back of the barn affair, viewed by a mob free to move as it pleased. Obviously this sort of thing can't go on when there is 300 hp skittering between rows of crowds, and a rope is all that separates machines from men. It might be that the consciences of the race promoters are eased when death comes to someone who ducked under the ropes or ignored a sign, but that doesn't solve the problem. The responsibility doesn't lie with the drivers, they know and appreciate their own risk. It doesn't lie with spectators who come for the thrills.

Promoters who administer these affairs must accept the total responsibility for crowd safety. If they can't do this, then a central commission must be appointed to investigate and maintain rigid control, licensing promoters and carefully inspecting the track and grandstand conditions before each race. A promoter who is found guilty of neglect will have his license revoked. Any injury to a spectator constitutes neglect—a man willing to profit from a business enterprise must bear the responsibility for the safety of those from whom he is profiting.

Many say that racing is at the crossroads of survival. This is a naive attitude. As long as there are two people who have cars, they will race one another, and a crowd will gather to watch. Let's solve the whole thing right now with a responsible commission.



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the Schedule

Domestic Events

Date	Club	Event
Nov. 6	SCCA	Races, Los Angeles.
Nov. 6	BCSCC	Rally, Vancouver, Brit. Col.
Nov. 6	RMSC	Rally.
Nov. 12	WSCC	Turkey Tour Rally.
Nov. 13	MGCC	Rally and Buffet.
Nov. 19	JOA	Frost is on the Pumpkin Rally.
Nov. 20	LISCA	Gimmick Rally.
Nov. 20	GSCC	Autumn Rally.
Nov. 20	EPSCC	Rally.
Nov. 20	NWSCCA & PSSCC	Race, Shelton, Wash.
*Nov. 21-27	MSCA	Great American Mt. Rally, Multiple starting points.
Nov. 26-27	CalSCC	Races, Palm Springs, Cal.
Nov. 27	SSCC	Birthday Rally.
Nov. 27	BCSCC	Rally, Vancouver, Brit. Col.
Dec. 3	PSSCC	Annual Dinner, Seattle, Wash.
Dec. 3	IoSCCA	Annual Meeting Cedar Rapids, Ia.
Dec. 4	LISCA	Christmas Present Rally.
Dec. 9	LISCA	Annual Meeting and Election.
Dec. 10	NESCCA	Annual Business Meeting - Election.
Dec. 10	CIHISCCA	Annual Dinner.
Dec. 11	RMSC	Rally.
Dec. 14	WSCC	Annual Meeting and Election.
Dec. 14	CSCC	Annual Meeting and Election.
Dec. 17	SSCC	Holly Daze Rally.
*Jan. 14-15	SCCA	Annual Meeting, Detroit, Mich.

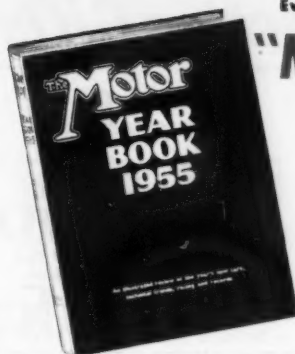
International Events

Dec. 4	Rio de Janeiro Grand Prix.
Dec. 5-11	Nassau Speed Week, Bahamas.

* Major or Nationwide.

Key:

BCSCC—Sports Car Club of British Columbia
CalSCC—California SCC
CIHISCCA—Central Illinois Region SCCA
CSCC—Connecticut SCC
EPSCC—Eastern Pennsylvania SCC
IoSCCA—Iowa Region SCCA
JOA—Jaguar Owners Association
LISCA—Long Island (NY) SCA
MGCC—MG Car Club
MSCA—Motor Sports Club of America
NESCCA—New England Region SCCA
PSSCC—Puget Sound SCC
RMSC—Republic (Aviation) MSC
SCCA—Sports Car Club of America
SSCC—Sperry SCC
WSCC—Westchester (NY) SCC



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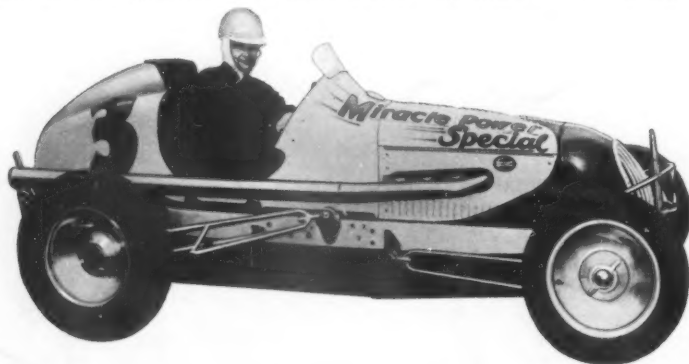
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Why sluggishness can attack even the best of motors

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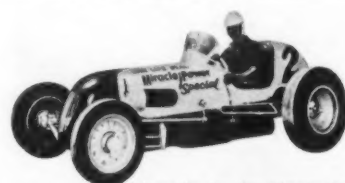
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